

University of Alberta

The Accelerated Learning Program Study

by

Jagatheesan Saxon Govender



A thesis submitted to the Faculty of Graduate Studies and Research in partial fulfillment
of the requirements for the degree of Doctor of Philosophy

Department of Educational Psychology

in

Special Education

Edmonton, Alberta

Spring 2003

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Abstract

This study examined the individual empowerment of students at two First Nations schools in northern Alberta through their participation in the Accelerated Learning Program (ALP). The program seeks to holistically enhance student achievement levels and personal development through differentiated instruction and programming in all areas of language arts for students in Grades 1 to 6.

This ongoing study utilized both quantitative and qualitative research methodology in a longitudinal framework to (a) examine the efficacy of the program in meeting some of the challenges faced by the two communities in question, in the context of efforts to transform the locally-controlled system of education; and (b) monitor the academic and personal growth of students by following the trajectory of their academic and developmental progress.

Specifically, this study explored the relationship between two groups of third-grade children's performances on the Woodcock-Johnson Psycho-Educational Battery-Revised (WJ-R), the Weschler Intelligence Scale for Children (WISC-III), and Alberta Provincial Achievement tests. One group of students had been exposed to the ALP, while the other had not. Significant interaction effects were noted for the experimental group on scores of Broad Reading, Broad Written Language, and the Verbal Comprehension Factor. These results provide some initial support for the use of differentiated instruction in the ALP in helping students with learning problems. Variables such as student self regulation during the active engagement of students as learners and student motivation have been identified for further investigation in this ongoing research.

Acknowledgements

To the Chiefs and Councils, elders, school boards, community members, parents, and students at both research communities, thank you for the privilege of access and the courage to embark on the remarkable and arduous journey towards individual and community empowerment.

To the school administrations, teachers, and teacher assistants, thank you for your enthusiasm, critical appraisals, and most importantly for embracing the *constancy of change* as the ALP evolved over the years.

To Amanda, L., and Allan G., thank you to two remarkably adept and talented individuals who more than filled their multi-faceted roles as research assistants, ALP coaches, and editors-at-large. You made the longitudinal scope of this project feasible and a reality.

To my committee members, thank you for your invaluable feedback and for the sharing of your wisdom on both the content and the process.

To Dr. R. Mulcahy, thank you for your unwavering commitment and desire to see the project through to its completion. Thank you for the consistency of support, encouragement, and belief. You truly epitomize the qualities of selflessness.

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CHAPTER 1

BACKGROUND

The history of educational policies that sought in one way or another to achieve the cultural assimilation of First Nations peoples has, in turn, given birth to a series of issues that have crippled one generation of Native children after another, including low levels of high-school completion and overall academic achievement and stubbornly high rates of illiteracy. Against the background of dependency, health crises, and social violence, which often characterize life in Native communities, the challenges faced by young people in the school setting are often further exacerbated by social ills that are disproportionately experienced by their demographic: low self-esteem, high suicide rates, family violence, and substance abuse issues, among others.

To many First Nations, regaining control over their community's education system is a first step in the attempt to address many of these problems (Cardinal, 1977; de Waal, 1995). In the context of the long-term vision of self-determination, local control of education has also been viewed as both a means and a manifestation of regaining control over their social and economic future.

However, solutions often continue to elude these communities once that first step towards local control has been taken. While seeking new ways to exert their jurisdiction, bands often find themselves at a loss as to how to address the very issues that signalled the failure of previous systems (Matthew & Kavanagh, 1999). One particularly discouraging reality is that the achievement levels of Native students remain quite low. In a recent report from the Auditor General (2000), it was suggested that if present rates of achievement remain consistent, it will take 23 years for Native students to achieve

educational parity with dominant Canadian society. Where once education was viewed as the road to prosperity and fulfillment, there is now a sense of urgency to find solutions. Given that youth form the largest age group of most First Nations populations, there is growing concern that the problems that plague this demographic will go a long way in shaping the lives of tomorrow's communities.

As Barman, Hébert, and McCaskill. (1987) wrote, First Nations who assume local control over education in fact seek to answer two general questions. First, what must the community do to create a 'quality' system of education? And second, given the extent to which the Native experience of the failure of education institutions to meet their needs has been linked to disempowerment and dependency on external agencies, how will that community define what is *Native* about their *Native education system*? In other words, how will they create a system of education that helps to build the community into a viable, fulfilling place to live—where band members can survive and prosper in relation to the outlying socioeconomic milieu, *and* where they can do so on the community's own terms as a First Nations people?

The Setting

My interest in student and community empowerment through education emerged from my four-year experience with the Accelerated Learning Program (ALP) in several First Nations community schools in northern Alberta.

The school under study adopted the program soon after the band assumed jurisdiction over education in 1995. This school receives students from the three member communities that comprise the band, and also from the Métis settlement bordering the community. In 1996 the population on reserve was estimated at 805 by Census Canada

(INAC, 1996, p. 2). The cultural background of the majority of students is Cree, and a minority come from Métis families. Because Cree is the language most often spoken at home, many students are learning English as a second language when they arrive at school.

The special needs present among this population are diverse and complex. There has been no systematic attempt to quantify the special needs present in this community, and the description that follows emerges from available reports, discussion with key informants, and a current list of students with provincial/federal codes for special needs. Special needs present among this student population include children with general learning difficulties (which may or may not be associated with a discernible learning disability), emotional difficulties, speech/language impairments, and symptoms associated with fetal alcohol syndrome/fetal alcohol effects.

Prior to the introduction of the intervention, the experimental school's Provincial Achievement Test results indicated that average achievement levels were quite low: In the academic year 1997/1998, only 20% of students had achieved at an acceptable standard on the total test at grade. In the academic year 2000/2001, 80.4% of students had achieved at an acceptable standard on the total test. Furthermore, attrition rates among the approximately 200 students at the school had been consistently high since the takeover, and the school had yet to produce a high school graduate.

In this light, the Accelerated Learning Program was adopted as part of the community's attempt to address several fundamental issues that impeded their ability to meet their two main goals in education:

- to enhance student achievement to the point of being able to retain students until high school completion; and
- to effectively meet the special needs present among its students.

The purpose of the remainder of this section is to provide a historical context for the manner in which the Accelerated Learning Program was adopted and developed by this community. The information presented herein emerged from background research and discussions held early in the research session.

Local Education in an Historical Perspective

In 1989 the petition from a subsection of a northern Albertan band was granted by the federal government, allowing the group of some 300 persons to form its own band on a neighbouring parcel of land. With the successful settlement of a separate land claim towards the end of 1990, the band received title to approximately 16,000 square hectares in the Peace River region, a high-traffic area of a variety of families and businesses that would come to support almost three quarters of the band's burgeoning membership. With the settlement as a foundation, the band found itself able to take steps towards self-government. Over the next few years, the community would assume legal and financial jurisdiction over its health services, social services, policing, economic development, community administration, and education.

Characteristic of the time, the decision to take over jurisdiction in education was marked by hope, anxiety, and trepidation. The relationship between local First Nations and the Northland School Division No. 61, the provincial school board that held current jurisdiction, had been a long and complicated one. A lack of faith in Northland's ability to deliver a quality education had resulted in the transfer of jurisdiction several times

between the province and First Nation in question. To many parents, the system seemed too distant and unwieldy to effectively address their concerns. With social passing and low levels of student achievement a stubborn reality, Northland seemed unable to prepare students to meet the challenges of adult life or the needs of their community. Many began to wonder whether a community-driven school would be better able to address the needs of their children.

Faced with the growing number of its school-age population, the band regained control over local education services a mere five years after its own establishment as a distinct political and social entity. Although the band had planned to assume control gradually over a five-year period, allowing time for the community's infrastructure to take shape, the process was condensed into the space of a year at the government's insistence. Against this deadline, an interim school board was quickly organized to oversee the construction of a new school and the development of a managerial infrastructure. In September 1995 a K-12 community school opened its doors on the main reserve of the band in question.

The band's first challenge was to face the task of fashioning a new system able to meet the needs of an evolving and complex society. From 1989 onwards, the region surrounding the community was witness to an influx of new or returning individuals and families with varying claims to band membership. Questions of political representation were brought with the need for the band to articulate the nature of its relationship with its Métis neighbours, as well as to both status and nonstatus members of its own growing numbers. In response to these issues, the interim board soon gave way to an inclusive

school board made up of elected representatives of the three communities that made up the band and a fourth seat reserved for a representative of the Métis settlement nearby.

In the short and hectic space of time during which the inherited system needed to be modified or recreated completely, many of the issues that had troubled Northland were suddenly left on the laps of people who, for the most part, had little direct experience in the management, let alone creation, of a system of education. Endemic problems that were a cause for concern not only locally, but also nationwide, needed to be addressed: from low achievement and high dropout rates, to a culturally unresponsive curriculum and school system.

Beyond the vague notions embodied in the band's mission statement, however, there was clearly no consensus on the path that local education should pursue. Study participants for the most part indicated that they thought education to be important for the future of both their children and the community. In response to a survey issued by the Band Council on the topic of forest management, for example, the largest group of respondents (27%) answered that revenue from the harvesting of natural resources would be best put to use in education, with the next largest (19%) group suggesting economic development. Illustrating the role of band-run schools in community efforts to redefine themselves, several participants of this study suggested that the school curriculum should be changed to reflect the culture and future needs of the community. The importance of communities having control over what their children learn, one participant declared, lies in the fact that they know what they will become. However, a second, more skeptical participant also queried, "Do [parents] really know what they're capable of becoming? Is the vision there? Is the belief that they can be more *there*?"

The development of a coherent vision for local education has been hampered by several factors, most centring on the fact that the band is still very much in the process of becoming a "community." Participants agreed that relationships among community members were generally stronger in the past and suggested that individuals were more likely to look towards one another for support, because it was that much more difficult to maintain a family while pursuing a more "traditional" lifestyle. There is also a sense that internal family relationships were stronger in the past. Parents were believed to be more accountable to their children in the past, children in turn being brought up to show more respect to their families and elders in general. Certain participants also referred to a collective sense of responsibility for raising children that extended beyond the family, to the community in general, a sense that they no longer see present among community members.

Today, in contrast, there is a high degree of dissension and division among community members, and few people were willing to say that things are improving. Most participants referred to the historical movement of new families into the area, particularly citing a vast movement during the late 1960s and then again during the formation of the band in the late 1980s. Despite the fact that all families have historical roots in the area to some degree, there is still a strong sense that certain families belong to the community, and others do not.

A third factor contributing to the lack of consensual vision for education is that there is no one "typical" educational experience here. Members of the community who participated in the study, whether as parents or board members or teaching assistants, come from markedly different backgrounds, and their experiences with education are

quite diverse. To begin with, the range of education completed by the study participants was vast. The typical level of education completed by parents of ALP students who participated was Grade 9. Census data from this band collected in 1996 indicate that 41% of the population hold less than a Grade 9 education, with 21% holding between Grade 9 and 12 (INAC, 1996, p. 1).

The variety of educational experiences was most apparent among the population of parent informants. Participants over 30 years of age most often indicated that they had stopped attending school by Grade 8, the highest grade offered on-reserve until more recent times. Members of this subgroup relayed a common story of attempting to continue their schooling by leaving their family to move to Peace River for the school year; often having to quit and return home once the distance from their family and the alienation of being alone in an urban setting proved to be too much. On the other hand, a handful of participants have, in fact, left the reserve for some period of time to attend college or university, having returned after successfully completing programs in a variety of disciplines. Further yet, several older informants relayed stories of attending residential schools. However, unlike the negative accounts often recounted in the media, their experiences were for the most part remembered as positive ones. These participants remembered there being more discipline and respect taught to students in the residential setting, and in some cases they commented that students seemed to learn more of the basic skills they would need for adult life than students do today.

A final factor can be identified as contributing to the community's difficulty in articulating a common vision for education. Due to an influx of people with different life experiences and goals and to a rapidly changing economic base, it is difficult to identify a

general lifestyle that connects individuals in the community. As many factors as there are present in daily life to unify people, there are as many more that seem to work to divide community members. For many informants, language is a site of identity formation. According to the 1996 Census, 57.1% of band members counted an Aboriginal language (Cree) as their mother tongue, whereas 41.3% indicated English as their primary tongue. In the latter subsection, 61.9% indicated that they had some knowledge of an Aboriginal language (INAC, 1996, p. 1). Given the considerable discrepancies in the place of Cree in the lives of different families, the place of this language in the band's long-term vision of education has yet to be decided. This was reflected in discussion with parents and other key informants from community. Opinions were quite varied on the question of the role that the school should occupy in the instruction of Native culture and language. Not all parents involved in the study were in favour of incorporating Native culture into the school curriculum, because they considered it to be an impediment to their children's ability to succeed in learning to read and write in English. Further, for many non-Cree teachers, although they accept that the retention of Cree is important to instilling a positive sense of self in the students, there was a sense that it is still something that they "are up against" in the effort to teach them English language arts. Many participants suggested that school is an unnatural and inappropriate forum for teaching culture and that it is the responsibility of a child's family to socialize the children into a given language and way of life. In general, most participants in the study were of the opinion that working towards higher levels of success with a curriculum that prepares students for a successful adult life is more important than the effort to maintain a culture that has little current connection with the job market. Although a seemingly prevalent idea, however,

these views are in stark contrast to current research that has indicated that Native students who have a firm backing in their home culture and language are more likely to have higher rates of achievement, educational success, and positive self-concept than those who do not (Deyhle & Swisher, 1997).

Conflicts of this nature are at the heart of the community's growing pains and, illustrating how band-run schools are often the site of community building, filter naturally into the daily running and broader development of the school itself (Calliou, 1993). Nonetheless, the community (like its school) is very much a "work in progress," and they are justified in showing pride in the achievements that the school, as a band-run school, has secured to date.

A Local Manifestation of the Accelerated Learning Program

The Accelerated Learning Program (ALP) was introduced during the 1998-1999 school year to provide a consistent framework for addressing the twin concerns of achievement and special needs at this school. During the 1999-2000 school year, a total of 53 students took part in the program for at least four months, of whom 47 were interviewed for this study.

Program staff includes two coordinators, one of whom has been involved in the program since it commenced in 1998, and four teacher assistants. Due to the high number of students involved in the program, all staff members act as instructors. During the 1998-1999 school year, ALP accommodated 42 students; and in the 1999-2000 school year, the program included 53 students.

The program is housed in a resource room made up of two rooms divided by a collapsible wall in the centre of the school. Each instructor normally works with each of

group around a table and work space set off from the others by dividers. The ALP program runs during the first four blocks of each school day, with additional time set aside for ALP staff meetings, workshops, and additional individualized tutorials. During the afternoon, teacher assistants typically assist a particular classroom, and the ALP coordinators spend time team teaching or planning.

CHAPTER 2
SPECIAL NEEDS AND THE PROMISE OF ACCELERATION IN THE
TRANSFORMATION OF FIRST NATIONS SCHOOLS:
A REVIEW OF THE LITERATURE

At one time the attainment of self-determination by First Nations was expected to signal the "rebirth of Canada's Indians": a period of healing and renewal in which First Nations societies would finally obtain the means to address the many social and cultural ills that had immersed one generation after another into a cycle of dependency, poverty, and social violence (Cardinal, 1977). As one First Nation after another chose to reclaim control over the education of their young people, it was expected that such an act would represent a first step in disbanding the historical association between education and cultural assimilation, social dissolution, and dependency (King, 1987; Longboat, 1987). Education would then represent a vehicle through which First Nations would be able to determine the course of their social development.

The past two decades of landmark court decisions, treaty settlements, and agreements have proven these sentiments to have been somewhat overly optimistic. First Nations schools find themselves struggling with many of the same issues that characterized previous systems of education. They witness a high number of students with multiple and interrelated, but often diverse, special needs. Student achievement and success at school remain limited to a small proportion of student populations, and dropout rates continue to soar. Perhaps most distressing, the challenges faced by young people in the school setting remain exacerbated by a series of social strains disproportionately experienced by their demographic sector: low self-esteem, high rates of social and family

violence, and substance-abuse issues, among others. Given the complexity of the issues at hand, and without the benefit of experience in the management, let alone creation, of an education system, bands are often uncertain as to how to address the special needs that their children face. Against this backdrop, many of the ideals underlying the movement towards self-determination may seem futile and out of place.

Although the dilemmas faced by First Nations are unique to their respective histories and current circumstances, many more challenges resonate with the experience of Canadian education as a whole. Like non-Native schools struggling to become "inclusive" in their treatment of exceptional students, First Nations schools face the challenge of creating an approach to the child that takes into account the whole self: "The child is a total being, and those who work with children must never lose sight of the child's basic life components: physical, mental, social, emotional, and spiritual" (McKay & McKay, 1987, p. 64). Schools are becoming aware that their efforts to address special needs and low achievement in general must be responsive to the many elements that shape children's ability to learn, many of which extend beyond basic skill learning and academic performance.

Further, the ideals that underlie the drive for self-determination in fact remain quite critical to the success of First Nations schools, because they provide often the only consistent source of direction and long-term perspective. By definition, *local control* refers to the attainment of autonomy in political, administrative, financial, personnel, and curricular matters (Barman et al., 1987, p. 9). The concept can also be extended to refer to the ability of a particular school to meet the needs of a particular community and First Nation. Barman et al. wrote that band-run schools must endeavour to answer two central

questions: "How will they bring about a system that can deliver a quality education?" and "What is essentially 'Indian' about Indian education [in the eyes of a given community]?" (p. 7). Schools must seek to offer a brand of education that allows children to become truly "bicultural" in outlook and capability. Although at one level education must facilitate students' capacity to attain an adequate standard of living and to reap the benefits of participation in national society and economy; it must also facilitate their development as citizens of their First Nation by inducting them into a common culture of values, institutions, priorities, and worldview (Barman et al., 1987). The question of how these goals figure into the practicalities of locally controlled schools, however, remains largely unanswered.

This review examines this sequence of ideas as it has been developed through recent literature on Native Studies, cognitive and educational psychology, and educational reform. To begin, the recent history of Native education in Canada leading to the movement towards self-determination is reviewed, with an emphasis on the experience of Alberta First Nations. Themes related to the particular challenges faced by schools under local control are discussed. Second, the movement of reform within special education over the past two decades in North America is reviewed, highlighting the literature on inclusion and school-based reform. This discussion continues in the following section by a review of current literature on modes of instruction that seek to address the 'whole child' in an inclusive setting; namely, cognitive and metacognitive instruction. Finally, the literature on one successful mode of intervention, acceleration, is reviewed.

Native Education, Special Needs, and the Challenge of Local Control

Who cares what happened in 1492? I want to know what happened to Indians in 1492. Curriculum at the early stages was important. . . . We have the control now; we can look at things, look at areas that we could implement that we never had the opportunity to do when the school division was running the school. We don't need to have a social program that just teaches our kids about other cultures, other heritages; I said we can teach our own now. (de Waal, 1995, p. 65)

Many First Nations are in the process of reclaiming authority over their children's education in "unique, locally responsive forms of sovereignty" (Calliou, 1993, p. 27). For many communities, local control of education has become both a goal in the drive towards and a means through which self-determination and the creation of healthy, viable communities will be achieved (Assembly of First Nations, 1990; Royal Commission on Aboriginal Peoples, 1996). Although First Nations students are still more likely to be "at risk" for educational failure than are other Canadian students, "great strides have been taken by Indian people to take control of the system of education (and other institutions) that affect their future" (Deyhle & Swisher, 1997, p. 115).

State provisions for the education of First Nations students has been an integral element of the special relationship that exists between First Nations and the federal government, as set out in treaties and legislation. For as long as it has been driven by government policy, however, the education of First Nations children has been qualitatively different from that developed for other children and an experience most often associated with social dissolution and failure. Consistently neglecting the needs and aspirations of the people in question, Native education policy has typically been shaped by the goals of Euro-Canadian society as it attempts to set the tone of its relationship with Native peoples (Cardinal, 1977; Deyhle & Swisher, 1997; Matthew & Kavanagh, 1999).

First Nations are still attempting to come to terms with the experience of a system founded on the goal of effecting their assimilation into Euro-Canadian society, a legacy which manifests in stubbornly high rates of illiteracy and low rates of school attendance, graduation, and educational accomplishment overall (Auditor General, 2000; Brookes, 1991). Whether in federal, provincial, or band-run schools, many students do not currently leave school equipped to function in the adult world of the reserve or urban centre, acquiring "neither the credentials for jobs in the mainstream economy nor a grounding in their languages and culture" (Royal Commission on Aboriginal Peoples, 1996). In a rude parody of the "circle of well-being" that has been depicted by the Canadian state as the foundation of healthy, self-governing communities, educational success remains at the mercy of a series of crippling social realities that pervade life for Native youth: the loss of cultural self-esteem and racism; violence at home and within peer groups; suicide; substance abuse; trouble with the law; endemic health problems, with particularly high rates of diabetes and long-term physical disabilities; substandard housing, unclean water; and other risks to health (Auditor General, 2000; Royal Commission on Aboriginal Peoples, 1996).

The first section of the review examines the historical factors that have placed Native students at risk for academic failure. Current literature illustrating the impact of Native education policy on First Nations schools in Canada is examined. The efforts of First Nations in Alberta to offset this legacy through the attainment of local control in education is reviewed, with particular attention paid to the relationship of autonomy in education to collective empowerment. Finally, the review examines some of the

challenges that have faced First Nations communities who are in the process of recreating local education, with particular attention to special needs.

A Summary of Native Education Policy

The earliest examples of intervention in the education of Native children extend through a context of settlement, trade, and exploration, and various examples of a mutually beneficial coexistence between Native and European societies. Even during the period of Native-White relations that predated the assimilationist policies of the Canadian state, Native education was intimately linked to the assimilation of First Nations into settler society. Assuming that Native cultures were destined to disappear, mission and industrial schools focused their efforts on ensuring their demise through the promotion of segregation, the abandonment of Native languages and cultural practices, and conversion to Christianity. Education became increasingly linked to the physical or regulatory control of Native populations; the direct result of a desire to increase settler access to the land and resources in the western regions already populated by First Nations peoples (Brookes, 1991; Burns, 1995; INAC, 2000; Matthew & Kavanagh, 1999).

The education of children amongst First Nations cultures prior to these incursions would have been markedly different from that offered by settler society. Matthew and Kavanagh (1999) described "traditional" education as embedded in a local way of life, "natural, holistic, informal and community based" (p. 3). Through a variety of experiences, children would be given the skills, knowledge, values, and beliefs that they would need in order to function effectively within the family and community. As state interference in childrearing increased, however, children became increasingly separated from their families and communities (Brookes, 1991; Burns, 1995; de Waal, 1995; INAC,

2000; Matthew & Kavanagh, 1999). Native education throughout the 19th and early 20th centuries was largely characterized by isolation and, ultimately, the social disintegration in First Nations societies (Goddard, 1993; Indian Chiefs of Alberta, 1972).

As jurisdiction for Indian affairs was handed from Church to military to colonial government, education remained at the fore of policies intended to address what had become identified as the "Indian problem": a widening social and economic gap between Indian and non-Indian society, and the general persistence of Native cultures (Brookes, 1991; Royal Commission on Aboriginal Peoples, 1996). Throughout the 1950s and 1960s, the government's plan to address the "problem" was formally articulated in policies aimed at advancing the integration of Native people into dominant society (Burns, 1995; Cardinal, 1977). In 1969 the government issued a statement outlining its position on issues related to Native sovereignty, including education, which came to be known as the *White Paper*. Although acknowledging that First Nations people had a particularly complex series of social problems with which to contend, it argued that they should be treated no differently than other Canadians and issued a *de facto* renewed call for their assimilation into Euro-Canadian society. The paper recognized the imbalance of educational opportunity that confronted Indian children and proposed that Indian children no longer be treated as wards of the state, but as citizens of the province (de Waal, 1995; Goddard, 1993).

To this end, Indian and Northern Affairs Canada entered into formal agreements to transfer responsibility for Native education to the provinces. By providing equal opportunity for Native children within the regular public school system, it was reasoned, the government was providing them with the same chances of success in their adult life

as members of Euro-Canadian society had. However, it was also thought that involvement in public schools would do more to encourage the absorption of Native students into dominant society than a segregated education in which the students' parents were still a major influence. Interpreted as an attempt by the government to dodge its responsibility for providing educational services, the action enraged many First Nations (Brookes, 1991; Canadian Education Association, 1984). Nonetheless, by the late 1960s the process of closing down state-funded residential schools was completed, and most children reaching high-school level were bussed out to nearby public or separate schools (Brookes, 1991).

The rate of Native student success continued to be as abysmal under provincial as it had been under federal jurisdiction. Dropout rates climbed to higher than 90% in some areas during the first decade of integration (Cardinal, 1977). A report examining the efficacy of the policy suggested that Indian students were performing on average at least 10 months behind their non-Indian classmates of the same age (Hawthorn, 1967). In northern Alberta the Northland School Division was established in 1960 to provide educational services designed to meet the demands of the northern region of the province, with its remote, scattered settlements and sparse population (Alberta Education, 1982, 1996). Many parents were disturbed to discover that their children had been passed into subsequent grades even when they had not mastered the current grade curriculum, reflecting Northland's policy of "social passing" for Native students (Alberta Education, 1982, 1996).

Similar to earlier periods of intervention, little thought had been put into the impact of isolating students from their family and communities on their education. At

school, rifts in cultural outlook often proved difficult for students and teaching staff to overcome, rifts that would surface in conflicts over issues such as personal autonomy, time, and schedules. The experience of alienation and the lack of support for their developing identity as Native Canadians proved to be a residual effect of the period of residential schools. Despite the official abandonment of assimilationist policies, public schools failed to accommodate, let alone foster, Native culture and identity within curriculum. For this reason, many authors have argued that the distinction between "integration" and "assimilation" from a policy standpoint was negligible (Brookes, 1991; Cardinal, 1977).

Furthermore, the impact of the removal of their young on the survival of Native communities in the long run was of little concern to policy makers (Alberta Education, 1982; Goddard, 1993; Indian Chiefs of Alberta, 1972). A contemporary writer described the generation gap that grew as children were forced to leave home in their most formative years: "[Parents] sent them off, hopefully to receive the best education possible, and the next contact they had with the children was when they dropped out of school" (Cardinal, 1977, p. 194; cf. Alberta. Task Force on Intercultural Education, 1972, pp. 79-92). Nonetheless, assimilation was "completed" for very few Natives.

Instead, by the 1970s widespread dissatisfaction with the education that their children were receiving, astute leadership and organization at the grassroots level coalesced into a forceful call for the building of school facilities on reserve. With the eruption of a series of stand-offs between Native activists and government authorities, Native education came to the foreground of national awareness (Cardinal, 1977). The year 1972 became a watershed year in Native-White relations in Canada with the

publication by the National Indian Brotherhood (the former designation of the Assembly of First Nations) of the paper *Indian Control of Indian Education*, a response to the *White Paper* (Matthew & Kavanagh, 1999). The statement represented the first call for the return of jurisdiction over education to Native people. The paper also went a step further by calling for a reconceptualization of education based on the philosophies, values, and rights of First Nations people and proposed the creation of school structures, curricula and decision-making arrangements more in tune with the culture, needs, and aspirations of Native communities.

During the same year the association of the Indian Chiefs of Alberta issued its response to the *White Paper*, formerly entitled *Citizens Plus*, a statement that came to be known as the *Red Paper*. The statement also called for the devolution of control over education to First Nations, but deliberately placed the demand in the context of a discussion on Aboriginal rights and self-government (Indian Chiefs of Alberta, 1972). It articulated an appeal for the recognition of the right to equal opportunity in education, inherent in the notion of Aboriginal rights as set out in the body of treaties and agreements between First Nations and settler society. "Our education is not a welfare system. We have free education as a treaty right because we had paid in advance for our education by surrendering our lands" (p. 14). The paper also recognized the substandard levels of education that characterized the younger people of Native societies and deliberately drew a connection between that reality and the discrimination that marked the experience of Native children in the mainstream education system. Implicit to the *Red Paper* was the idea that self-determination in education would be a first step in

addressing this state of affairs, as well as the pervasive poverty and social stagnation that characterized life in most First Nations communities.

The paper drew explicit connections between the empowerment of the individual and the collective empowerment of the First Nation in question. For the first time, the provision of services for students with special needs, those attempting to "come to grips with the technical and learning problems of self-development and language learning," was proposed (Indian Chiefs of Alberta, 1972, p. 63). Programming for exceptional students would be based on curriculum and language appropriate to each student's cultural context. Countering the main argument in the *White Paper*, the *Red Paper* asserted that Indian control over education should preserve the uniqueness of First Nations cultures, not dissolve it. In this manner, "collective empowerment" was presented as closely tied to the discovery of the self through individual development and a reappraisal of collective culture, language, and historical experiences (Burns, 1995; Calliou, 1993).

The federal government formally accepted the basic goals of the NIB paper in 1973, and in so doing issued in a new era in Native education policy (Canadian Education Association, 1984; Matthew & Kavanagh, 1999). Responding to the onslaught of criticism, Indian and Northern Affairs Canada redefined its mandate to meet three goals: (a) to assist First Nations in having access to appropriate educational programs and services;; (b) to assist First Nations in maintaining their cultural identity in this context, and (c) to assist them in developing occupational opportunities consistent with local needs and aspirations (Auditor General, 2000). The federal government adopted a series of policies that supported the "cultural development" of Native peoples and commenced

to fund community- or regional-based initiatives aimed at reviving or maintaining a variety of cultural forms (e.g., language, artistic creations, hunting; King, 1987). The Alberta government, for example, began to examine the standard material used in provincial curriculum in light of its applicability for use with Native students and to consider how to establish curriculum that included Native languages, culture, and history (Canadian Education Association, 1984).

Native representation in education decision making was also a priority for redress. Alberta Education (the provincial ministry of education) responded to the events of the early 1970s by creating Native advisory committees on education. In northern Alberta, despite the mandate of the Northlands School Board, Native involvement and representation remained limited until 1983, when a bill was introduced that provided for the election of a board of school trustees. This policy paved the way for an education system designed in light of local priorities and goals (Canadian Education Association, 1984).

Among the varied issues examined by the Royal Commission on Aboriginal Peoples (1996), education reform was cited as critical for the project of self-government. Although tepid in relation to some of the Commission's more far-reaching recommendations, the federal government's long-awaited response to the Commission in 1998 addressed concerns over the quality and relevance of current education for Native people, including the effectiveness of classroom instruction, community and parental involvement, management, and governance capacity at the local level. Government initiatives building on the policy have, however, been largely reactive and slow in coming. With the variety of circumstances under which devolution of control over

education has occurred, the need to clarify the government's role in the process remains a problem (Auditor General, 2000).

Despite the hope that characterized the devolution of educational jurisdiction to First Nations, local dissatisfaction with band-run schools is prevalent (Canadian Education Association, 1984; de Waal, 1995). Native control over education is considered by many to be a hollow victory under the direction of discredited Aboriginal leadership, with the federal government continuing to hold legal and financial reins (Burns, 1995). Stakeholders in many communities remain frustrated with the slow rate of improvement in students' ability to succeed in school. Many communities also remain acutely aware of the multiple elements of the school system that have changed very little, despite the potential advances that were promised with self-determination rhetoric (de Waal, 1995). Goddard (1993) even went so far as to say that the "experiment" of band-controlled schools has, in the end, done little to control the unnecessarily high "wastage of human potential" and proposed that bands relinquish the attempt to develop viable education on-reserve and enter into full educational partnerships with provincial school boards (pp. 166-167).

The following section reviews research on the challenges that First Nations have faced upon taking over control of education from the government. The relation of issues with which Native educators contend to factors stemming from the policy reviewed above is described.

Local Control of Education and Self-Determination

Local control of education has often been considered by First Nations to be both a mode and a celebration of educational autonomy, "an epiphany leading toward the reclamation of an authentic cultural environment grounded in a worthwhile education framework" (Koens, 1989, p. 37). "Self-determination" in this context implies that communities have the ability to identify their own needs and then to plan ways to meet them. It implies that First Nations communities have the right to experiment, to change their priorities, and to allow their systems of education to develop and grow. In more concrete terms, the concept implies that First Nations communities should be able to control income and expenditure, to establish curricula that suit local goals and values, to set criteria for success, and to have direct governance over their own affairs. This ideal has failed to characterize most cases of band-controlled education, even after devolution has occurred (Burns, 1995; Canadian Education Association, 1984; Goddard, 1993; Koens, 1989; Paquette, 1986).

The first band-run schools were established in the early 1970s. The legal framework for devolution may be included as a section of treaty settlements or emerge in the context of new treaties such as the James Bay Cree & Northern Québec Act (1975) and the Sechelt Self-Government Agreement (Canadian Education Association, 1984; Matthew & Kavanagh, 1999). Currently, band and tribal councils typically operate independent elementary and secondary schools on reserve, managed by band education authorities or school boards that may be appointed by a band council or elected by community members (Paquette, 1986, p. 5).

Although "local control" is appealing to many communities and a concept that is used variably as a political slogan or as grounds of power manipulation in the local setting, it is also very difficult to bring about under existing law governing public schools (King, 1987). Bands often have little direct experience in terms of management or education per se, and little is usually done to prepare them to assume the responsibilities associated with running a school system (Canadian Education Association, 1984). The literature on Native education has revealed a common series of challenges experienced by bands that opt to assume full control of their education system. These issues range from the short to long term, from issues related to devolution to more pervasive problems that have characterized Native education for decades.

In a review of literature on Native American education by Deyhle and Swisher (1997), the authors examined how policy, research, and teaching styles associated with Native education came to be founded on an ideology of deficiency. Although less acknowledged in the contemporary political milieu, this ideology is part of the legacy of assimilationist policy and serves to engender derogatory attitudes on issues as varied as Native languages, parental involvement, and intelligence and achievement (Berry, 1968; as cited in Deyhle & Swisher, 1997). These authors argued that the significance of this ideology, even in cases of locally controlled education, is that it continues to shape elements of school culture in a manner that makes success for Native students all the more unattainable.

Research on local control suggests that, beyond issues engendered by the deficit ideology, the day-to-day experiences of First Nations schools are equally shaped by the socioeconomic factors that inform a child's ability to succeed in school. These factors are

complex and interrelated and may include anything from health issues, neglect, family violence, and substance abuse, to the adequacy of housing and infrastructure and economic development (Auditor General, 2000). The following section outlines several of the more pervasive issues, particularly those that speak to academic success.

Achievement and the Deficit Myth

In their review of literature on Native education, Deyhle and Swisher (1997) found that there is no other aspect of the field that has been so often addressed in research as achievement testing, for reasons that trace the very trajectory of the discipline itself. These authors identified several ways in which deficit ideology informs current assessment and pedagogical practice by shaping common views of Native intelligence, cognitive strengths and weaknesses, and learning styles.

The first manifestation of deficit ideology to inform the education of Native children was a belief that they lacked the innate intelligence to succeed in school, at least to the degree of success experienced by the Euro-American students. Psychological tests of intelligence and innate ability were consistently interpreted to indicate results that Native students achieved less than non-Native students, until the validity of using assessments normed against a middle-class Anglo population with Native students was questioned. Several researchers also refuted the blanket assumption that Native students were inferior in all aspects of achievement by drawing evidence of exceedingly high test scores on visually based intelligence tests rather than tests based on verbal reason. Nonetheless, Deyhle and Swisher (1997) suggested that even today many non-Native education professionals remain unaware (in some cases, wilfully) of these conclusions. In

many cases the belief that Native students are of lesser intelligence has become the basis of a self-fulfilling prophecy (Deyhle & Swisher, 1997).

The deficit ideology has also engendered a misunderstanding of the culturally based differential learning style purportedly possessed by Native students. Deyhle and Swisher (1997) referred to a body of research that disputed the application of a deficit perspective towards the home and suggested that difficulties that students experience in school are related to the differences between the home and school cultures. At the basis of this discrepancy is a gap between Native and non-Native socialization or child-rearing techniques. Cultural differences in belief, attitude, and behaviour normally shape the communication patterns, interactional styles, and social values with which children are inculcated well before coming to school. "In other words, the styles and methods used by parents/caregivers determined how children learn to learn" (p. 150). The authors suggested that a particular "Native style" of learning can be discerned among First Nations, despite the variety of cultures in question (more than 500 different First Nations speaking more than 200 languages) and the degree of change they have experienced since first contact. The authors reviewed research that examined the various cultural behaviours and dispositions in question, including learning by observation and imitation, an egalitarian approach which adults usually use to base their relations with children, a communication style that involves a disdain for public display and a preference for private practice, and a preference for cooperative learning rather than scenarios that emphasize competition and individuality (Deyhle & Swisher, 1997; cf. Byrd, 1997; Matthew & Kavanagh, 1999).

This literature suggested that when students finally come to school, they do so with learning and interactional styles that may be quite different from those expected in the classroom. "Not only are Indian students faced with learning new concepts, but they must also become participants in a new cultural context" (Deyhle & Swisher, 1997, p. 138). Deyhle and Swisher argued that these cultural differences are in fact strengths that should be incorporated and capitalized upon in the classroom setting rather than depreciated and forcibly abandoned. They suggested that those educators who come to the classroom with this type of culturally specific information will be better equipped to bring about practices that are more sympathetic and effective with their students, heightening their chances for success.

However, while arguing that the cultural influences of the home result in different learning styles in the classroom, the researchers also warned that if taken too simplistically, this same information can be used to support the effort to define Native students in a deficit fashion (Deyhle & Swisher, 1997). This conflict exists, they argued, largely because the term *learning styles* is itself ill-defined and ambiguous. Researchers have, in fact, followed several lines of inquiry in attempting to clearly define and quantify the concept (Browne, 1990; Chrisjohn & Peters, 1986; Lewis, Wilson, & McLaughlin, 1992; Osborne, 1985). Some researchers focused their level of inquiry at the individual and approached the question by identifying axes of conditions under which a given student will be most likely to learn. Factors could include the immediate environment or the student's affective state, sociological factors, and physical needs (Laycock, 1980b). Others researchers have attempted to describe learning styles as consisting of distinctive, observable behaviours that are correlates of particular cognitive patterns. These cognitive

styles normally describe certain inclinations along a continuum of possibilities, rather than discrete behaviours (Browne, 1990). Still others have focused on how hemispheric activity informs human learning and have suggested that a given hemisphere is normally preconsciously selected to determine which hemisphere's strategies will shape a child's dominant learning style. Based on the suggestion that hemispheric preference is influenced by cultural background, some researchers have tentatively posited that Native children exhibit right-hemisphere dominance (Browne, 1990; Koens, 1989). On the basis of such research, several researchers have attempted to identify particular curricular strategies that correspond to the learning style identified as particular among Native students as a means of enhancing learning among this population (Wilgosh & Mulcahy, 1993; cf. Browne, 1990).

Chrisjohn and Peters (1986) argued that this type of research has been misused to justify remedial, nonacademic, and nonchallenging curricula for Native students. They suggested that the picture that such research provides of First Nations societies and cultures is undifferentiated, reified, and essentially a stereotype. The authors illustrated how the evidence indicating functional preference between right and left hemisphere strategies (i.e., between Native Americans and European society, respectively) is far from conclusive, and they warned that there are serious questions about the current state of such research in general (Chrisjohn & Peters, 1986; Wilgosh & Mulcahy, 1993).

Chrisjohn and Peters pointed to different performance levels between members of different classes of Euro-Canadian society itself and argued that such an observation does not warrant the explanation that the different subgroups function in a fundamentally different way. They concluded by suggesting that the poor academic performance of

Native children so often used as evidence may be more convincingly explained by an examination of sociocultural factors.

For Deyhle and Swisher (1997), the underlying issue in this discussion is that, if the "problem" of low achievement and general academic failure is localized to Native children, the effort to find ways to improve the situation will diminish. "Why bother to teach Indian children things that they are not capable of learning anyhow?" (Chrisjohn & Peters, 1989; as cited in Deyhle & Swisher, 1997, p. 152). They concluded with the words of Kleinfeld (1988; as cited in Deyhle & Swisher, 1997), a researcher who wrote that "good teachers always adapt to the culture of the child and the culture of the school. Nothing is lost by using the term 'learning style' to denote such teaching adaptation, but little is gained" (p. 152). The following section focuses on an issue that exemplifies both the outcome of low achievement among First Nations students and the attitudes of deficiency that may enhance it: the high rates of school failure among Native youth.

School Failure and the Character of Native Youth

Deyhle and Swisher (1997) found literally hundreds of studies and reports on the issue of Native student dropouts in the context of their review. Some reports focused on specific dropout rates, but most focused on descriptions of the "problem." However, the authors suggested that what is most revealing about the studies is "that few studies actually focused on the causes of dropping out, and even fewer provided the 'voices' of American Indian youth as to why they leave school" (p. 129).

In a review of the causal factors reported by Native students who have left school before completion, Deyhle and Swisher (1997) cited several strands of commentary that illustrate the importance of social relationships to these students. Students often declared

that they had felt "pushed out" or rejected by teachers and administrators. In many cases students felt that teachers did not care about them, and their comments revealed a minimal or superficial relationship with the teacher. In several cases students responded to their rejection by rejecting the school in turn, and others cited constant conflict with teachers or other students as reasons for leaving.

A second strand of commentary was related to school programming. Many suggested that the school curriculum was dull and unconnected to their lives or irrelevant to the goals they had set for themselves upon graduation. Some students were dissuaded from remaining in school due to being retained in a particular grade one or more times. Still another strand of factors evolved around student life outside the classroom. Certain studies noted a degree of peer pressure in student decisions to drop out, particularly among female students. Others suggested economic necessity as a prime cause of attrition, citing some students' need to find a job or work at home due to family or personal exigencies (e.g., teenage pregnancy; Deyhle & Swisher, 1997).

In a survey of the attitudes of Native adults towards literacy, participants listed a variety of negative experiences and factors that had acted as a barrier to their academic success in the past (Sawyer & Rodriguez, 1992). Several respondents who had been brought up in more "traditional" homes referred to a mismatch between the cultures of the home and school. Others spoke of a school system that did little to instil motivation or a sense of self-worth in its students. Respondents identified several school mechanisms that served to push Native people out of school with limited skills, ranging from neglect to negative instruction. "I knew I didn't know anything, but they still passed me. They didn't care because I was Indian. . . . Being forced into the Occupational Program was

degrading. I though I was intelligent, but instead I was labelled slow" (p. 289). When asked why they currently were not involved in a literacy program, their past experience coloured participants' current attitudes of indifference and bitterness.

In their review Deyhle and Swisher (1997) insisted that all students, including the majority of Native students who do successfully complete high school, face these same barriers, but they reminded readers that their responses to these challenges will differ. They identified three profiles that characterize various qualities of response that students may have to these variables: from the student who is able to adapt to the educational system and succeed, to those who passively resist and just float through, to those who actively resist and often make the decision to drop out.

Deyhle and Swisher (1997) suggested that the phenomenon of high rates of attrition is the most severe and dramatic manifestation of the failure of schools to meet the needs of First Nations students. The causes of chronic absenteeism and high dropout rates are elusive and complex. Whereas attitudes stemming from a deficit perspective look towards the character of Native youth, cultural barriers, parents, or the community for answers, research dating from the 1960s has been more apt to examine the school itself as a causal factor. This line of inquiry looks for elements of the "the social environment of the school and the classroom . . . that [present] obstacles to learning" (p. 125).

Culture as an Obstacle

The question of the place of Native culture in education is an issue with a long history in the literature. Culture has been considered not only in the context of questions related to "overtly" cultural facts such as language and artistic creation, but also in

relation to questions of the place that cultural behaviours, practices, or worldviews (i.e., religion and morality) should occupy in First Nations schools. The dominant attitudes of the place of Native culture in state curriculum can be argued to have changed very little over the years (Deyhle & Swisher, 1997). Although culture was once shunned from the curriculum as an obstacle to student progress and success in public education, in most school settings today it occupies a fringe position. Some communities have made an effort to incorporate those elements of local culture that they hold as integral to their way of life into school curriculum, whereas still others continue to define essential education by the state-defined criteria with which they grew up (de Waal, 1995; King, 1987; cf. Matthew & Kavanagh, 1999).

Deyhle and Swisher (1997) reviewed a study by Fuchs and Havighurst (1972) concerning teachers' attitudes towards assimilation and culture in the curriculum. The authors based their discussion on the still prevalent notion of "cultural deprivation," a term that surfaced in 1960s American sociology that refers to the purportedly limited experiences of impoverished children as a cause of poor academic achievement. With this understanding of Native culture, assimilationist policy at the state and school levels has argued against the incorporation of Native culture into school curriculum, while providing an excuse for the failure of those schools to meet the academic needs of Native students (Deyhle & Swisher, 1997). Researchers found that the majority of respondents held the "'man of two cultures' position, maintaining that Indians should acquire the skills and attitudes required for success in [dominant] society, but they should also maintain their culture" (Fuchs & Havighurst, 1972; as cited in Deyhle & Swisher, 1997, p. 121). Native teachers who participated in this study, it should be noted, held a position

similar to that of non-Native teachers, but were also slightly more inclined towards assimilation.

In King's (1987) study of a Canadian school undergoing reform after having assumed jurisdiction for education, the school staff held a similar view of Native culture. The staff in question had little understanding of the goals that the community held for their school and little sympathy for the idea that what should occur at a "community school" is "education for life in *this* community" (p. 48). Community education was alternately described by King as a tool to foster knowledge of the local heritage among students, a way to teach basic skills using community resources and cultural themes, and any effort to revitalize a local language that is based in the community's school. Ultimately, King understood community education as that which produces students who both value school and become better equipped to make decisions in life, whether they choose as an adult to live on the reserve or to leave (King, 1987). However, several teachers "asserted that, as long as the majority of the grade 1 children were 'failing,' it was a disservice to them to take time to introduce 'cultural studies'" (p. 47).

However, as Deyhle and Swisher (1997) argued, the majority of current studies on the subject have suggested a contradictory position: that knowledge of Native languages and culture is actually a positive correlate to academic achievement and success at school. In a review of studies examining school success and culture among Navajo students, for example, the authors found that students from strongly "traditional" homes were more likely to complete school successfully than were those who characterized their homes as more "modern." Students who identified their families as "moderately" traditional, yet having adopted certain Anglo customs, were more likely to be college

bound than those from either traditional or acculturated families. Further, in a review of literature on the impact of first language and cultural component to the curriculum, the reviewers concluded that students' first language was not so much a determinant to their success in school as was the successful transition to English. These findings stand in stark contrast to the deficit assumption that students who are more acculturated to the cultural behaviour of the dominant society will be more successful in a school setting based on that culture. The authors concluded, "A culturally non-responsive curriculum is a greater threat to those whose own cultural 'identity' is insecure" (p. 137).

However, Deyhle and Swisher (1997) argued that these findings do not warrant the blanket importation or substitution of Native cultural components for non-Native elements of the curriculum or school structure. "Although the inclusion of language, history and cultural information was important, a 'culturally sensitive' curriculum was not the solution or sole key to increasing school success" (p. 137). Rather, student success stems from a secure grounding in the ethnic identity of their family and/or community, in addition to the support of their community and families. Socialization by one's family into a particular set of roles continues throughout the school years for all children and is often just as important to the success of that child in the school domain as is what goes on inside the school itself. For students who do succeed academically, school (in acknowledgment of the social reality surrounding it) will have contributed to preparing them for a role that the students see as viable and desirable for adult life. As one participant commented in a study of women who had successfully negotiated the school domain, "Their success relied upon a familial commitment to their education. . . .

Their motivation was not for individual mobility but for the good of the family, and more generally, . . . it is an 'investment in the community'" (Deyhle & Swisher, 1997, p. 138).

Parents as an Obstacle

Research into Native education is replete with reports of the reluctance of Native parents to get involved with educators. These reports are full of suggestions as to the reasons for this reluctance, but suggestions for how to remediate the situation are scant. In a series of interviews with key members of an Alberta First Nation that had recently assumed control over education, de Waal (1995) found that, although all participants were adamant in their concern for parents involvement in their children's education, few specific suggestions for ways to remedy the situation were offered. Most suggestions that were made were punitive in nature (e.g., responding to a lack of involvement through fines levied on social assistance payments).

Deyhle and Swisher (1997) found that the deficit ideology that pervades the literature on Native education extends to shape prevalent attitudes of educators of Native students towards parental involvement. Early attitudes held that parental involvement was a negative factor because of the detrimental effect that their influence, as bearers of Native culture, could have on student assimilation; the less contact the parents had with the school, the better. The authors noted a change in attitude over time, to the point that current research has recognized the "dynamic, complex roles parents [play] in the education of their children," however, the extent to which this awareness been internalized by public and locally-controlled schools is debatable (p. 123).

Obstacles to parental involvement can be understood as embedded in the power relations that typically pervade First Nations schools (Byrd, 1997; de Waal, 1995; Deyhle

& Swisher, 1997). Many studies point to the damaging view that many parents hold of education, stemming from their own negative experience of school in the past. In Canadian settings many Native peoples who are currently parents of students were among the last to attend residential schools. Parents often consider the experiences of their own parents with government educational agencies and remember that they were almost completely shut out of the process of education once their children were removed to residential or day schools (Byrd, 1997; Deyhle & Swisher, 1997; Sawyer & Rodriguez, 1992).

A study of school success in the Northland School Division of northern Alberta identified two main reasons for a low level of parental support among its schools. First, Native people who are still involved in maintaining a somewhat "traditional" lifestyle (evolving around hunting, fishing, and trapping) may regard public education as of peripheral importance, given the demands of their lifestyle, which require a different set of skills. Second, the research team reported that parents to whom they had spoken felt alienated from schools for a variety of reasons grounded in personal experience. Some felt that education had been imposed on them by external forces, and others referred to bad memories of their experience with mission or day schools. Further, although relations with the Northland School division have improved since its introduction into Native communities, to a large extent decisions about education continue to be made by an estranged and far-away bureaucracy. Finally, participants in the study suggested a lack of trust in teachers hired by the school board, stemming from the fact that many, particularly those new to the system, teach their children while knowing very little about the community's way of life (Alberta Education, 1996).

Byrd (1997) sat in conversation with Native educators from the American southwest to discuss special needs and Native education. Participants commented on the difficulty that schools experience in attempting to bring parents of exceptional students in to participate in special education programming. They discussed the holistic, matter-of-fact way that children with special needs would be accommodated and cared for in the "traditional" community, how First Nations have traditionally been able to identify and address such challenges faced by their individual members. They argued that this historical fact belies the "deficit" argument in which parents are seen an obstacle to the effort to address special needs.

However, with the removal of Native children with special needs by state agencies, the role of parents in this respect was drastically altered. An Elder relayed the way that the Hopi family dealt historically with the special needs of children before the incursion of Euro-American society:

What happened was that the family, the individual in that family, the community, and the village were cognizant of the people with special needs, but they did not categorize them. They were always a part of, never outside of, the larger group. (Byrd, 1997, p. 46)

However, with the transfer of control over education from parent to outside agency, meeting special needs meant removing the child from his or her community to attend special programs in urban institutions. Parents would have little opportunity to learn with educators how to meet the needs of their children.

Research points to a lack of trust that exists between parents and schools, particularly those run by agencies and personnel external to their community. "They need to gain trust from these parents and let them know that they are looking out for the child's best interest" (Byrd, 1997, p. 44). Participants in Byrd's conversation suggested that first

steps in enhancing parental participation in the schools must involve reminding parents of the significance of the role that they could play in their children's education and of the strengths and resources they have available to offer in the endeavour. These testimonials illustrate the resource that educators may find in Native parents and communities as they seek to find holistic approaches to dealing with special needs. "You educate the individual, empower the family and community and build the capacity [to deal with special needs] into the community. We have made our people dependent on a system of care. That should not continue" (p. 51).

Teachers and Role Shock

Deyhle and Swisher (1997) documented the change in direction of Native education research from where the "problem" of Indian education was located in the students to where causal factors are located in the school. Identifying factors from the high rate of teacher turnover to a lack of understanding of Native students and the challenges they face to a lack of empathy towards Native culture, the authors argued that teachers and schools are in fact part of the problem.

Despite the goals of the self-determination movement, the number of Native and/or local teachers teaching in on-reserve schools remains quite low, and the mainstay of staff remains non-Native teachers. Taylor (1995) wrote that 90% of Native children in Canada will be taught by a non-Native teacher at some point in their lives, with many of them receiving the majority of their education from non-Native teachers. However, support directed at non-Native teachers in this setting to direct them through what is by all accounts a professional and personal experience very different from what they would encounter in a public school is often lacking (de Waal, 1995; Deyhle & Swisher, 1997;

Taylor, 1995). Although many of the goals that a given community holds for its children in local education are left for teachers to implement and fulfill, schools often make little attempt to communicate the role that it wants incoming non-Native teachers to play.

Taylor (1995) argued that few teachers in a Native setting are sure of their role both in- and outside of the school. Most see their place at the reserve school as temporary or as an early steppingstone at the beginning of their career. The majority experience some degree of culture shock soon after arriving in their communities, and this shock often shapes their outlook and actions both in school and in the community. Taylor identified several reactions to culture shock that the individual may have, including escape (avoiding the local community as much as possible by creating an 'alternative' community of outsiders); confrontation (i.e., complaint sessions); and encapsulation, or the creation of a "cultural bubble" in which ignorance about local cultural and social norms is at best maintained, and at worst celebrated. This isolation often ends up perpetuating teachers' sense of "the way that things should be" in school and personal relations, while contributing to the poor communication and strained relations between school and community.

Few teachers become active participants in the daily lives of their communities, although such interaction could potentially provide them with an understanding of how that community and its students view the role of teachers (Byrd, 1997; Taylor, 1995). A speaker in Byrd's conversation also addressed this issue when she indicated that teachers often neglect to attempt to become members of the community in which they teach, even if they have lived there for up to several years. Such an effort has its own rewards, one of which is the development of relationships that must be the first step in healing relations

between the schools and communities. "It is very important not only to understand the environment but also to participate in it, socializing with people after hours. . . . If you are going to be friendly with me at school or at your business, I expect the same after hours too" (Byrd, 1997, p. 50).

However, Taylor (1995) argued that the problem lies not with teachers' commitment to the communities in question, but rather to their perception of their roles as teachers. The role of teachers in the First Nations setting is qualitatively different and, he argued, more complex than that of a teacher in the city. While contending with a different culture, set of values, and behavioural norms, teachers must find ways to assist students who are most likely coping with a social reality much more severe than what would usually have been encountered by non-Native teaching staff. Additionally, students must often learn to cope with a general lack of resources and an unstable teaching population. Nonetheless, teachers often import without reflection what they understand to be the role of teachers in a city or large community to the community in which they have found themselves. This role may be school-centred, where involvement and social interaction with students outside the classroom is not expected (Taylor, 1995).

King based his 1987 article on the concept of role shock, referring to the phenomenon of anxiety, stress, and generalized personal trauma that is associated with entry into new cultural systems. Role shock differs from culture shock (i.e., personal anxiety as a result of a poor understanding of the configurations of behaviours and values which one finds in a new situation) in that it speaks to a cumulative set of frustrations and escalating stress that occurs when "an individual accepts a status with a feeling of assurance that he/she can provide appropriate role behaviours, only to discover that

others in the social situation do *not* accept those role behaviours as appropriate" (p. 44). King used the concept to analyze the reaction of teachers in a First Nations school in which the community in question had recently assumed control over education. Role shock for the staff came with the realization that they were unable to respond to community expectations for a "new, rational school pattern" because they had little conception of what vision the community held for the school and, consequently, little conception of what role they were expected to play. King argued that the need for structure and status-role security throughout the transition process is paramount to its success:

Without a firm ideological consensus . . . or explicitly defined role expectations, . . . autonomous local control means that someone or some group within each community must define new statuses and appropriate role behaviours which, in at least some important areas, means making decisions affecting the lives of others. (p. 61)

The impact of the rift between teachers and their community on students can be extensive. Students are easily able to pick up on negative or even neutral feelings that a teacher may harbour towards their community, parents, and/or culture. This awareness will often corrode the relationship of trust between teacher and student that is necessary for learning. "The student's self-image, perception of Native/non-Native interaction, and chance of graduating will all be influenced by their non-Native teachers" (Taylor, 1995, p. 224).

Deyhle and Swisher (1997) warned against assuming that cultural differences are by themselves the cause of the academic difficulties that students experience without considering the impact that power relations may have. They argued that "what teachers *do* to students—how power relations are negotiated in the classroom—is critical in

understanding American Indian student performance in school. And we believe that culture is the lens through which these events must be viewed" (p. 148). After describing in detail the complexity involved in the consideration of the issues facing Native students, they suggested that true cultural insight "enables one to look beyond differences that are superficial and socially determined to the integrity of the individual" (p. 148).

To prevent and/or relieve this situation, Taylor (1995) recommended a combination of personal resolve and community initiative. Teachers must acknowledge the differences in habit, behaviour, outlook, and values between the communities and their own culture and attempt to accept them. However, they also need to be trained and encouraged to actively seek to understand the culture in which they will be teaching. Teachers must also strive to be receptive to the innovation and change that may take place as communities attempt to integrate elements of their language, culture, or history into school curriculum and structures. Finally, teachers must recognize the gap between community norms and the culture of the school. Taylor concluded with a memory from his own experience as a teacher coming to grips with the role expected of him in a Native community: "In the end, I had to decide what role I would play in that community. That decision was mine, but it was not a decision taken in isolation" (p. 240).

Finally, a speaker in de Waal's (1995) study spoke of the work to be done by both community and school staff members to integrate the school into the fabric of the community:

It's a slow process, and I think it's more our fault that we do not take the time to get to know our teachers; we do not seem to find the time to knock on their doors and say, "Hello, we're just here for a short visit." We just stay at home and hope that a teacher might drive up and say, "Knock, knock." So we all wait. (p. 68)

The Neglect of Special Needs

In both the United States and Canada, the state has used the issue of sovereignty to avoid providing services or consistent funding for students with disabilities (Byrd, 1997). There is to date no comprehensive federal policy in Canada to direct provisions for special education funding for First Nations, despite a demonstrated pervasive and acute need.

In the Treaty 7 region of Alberta, for example, school funding is based upon an assessment using provincial funding methods (correlated to INAC resourcing levels) that focuses on student enrolment rather than the services required by the student body in question. Because the government does not provide special education resources per se, resources are filtered from the base tuition approved by parliament (Treaty 7 Education Steering Committee, 1994). In northern Alberta the Northland School Board reported that, as of September 1996, 90% of the total enrolment in its schools was made up of status and non-status Native students. The majority of this population speak Cree, with English being their second language. According to the report from the team reviewing the performance of the board, this fact impedes the progress of these students in Northland schools, accounts for many students' low levels of achievement on test scores, and inhibits their ability to cope with the Alberta curriculum. Despite the problems that the lack of English fluency poses, school boards do not receive funding for the instruction of English as a second language that is made available to immigrants to Canada (Alberta Education, 1996).

Several problems have arisen from this. Children with special needs in Native communities are not always identified before they arrive at school; those with

development disabilities, for example, do not have the benefit of early intervention programs to raise their level of school readiness. Second, there is often delay in accommodating the needs of these children once those needs have been identified. With respect to on-reserve schools, the lack of comprehensive services delivered in the community also means that parents and educators must go to great lengths to get referrals and often travel considerable distances to procure services that are needed to meet their children's needs (Byrd, 1997).

Standards and Institutional Failure

The literature suggested several interrelated issues that bands seeking control of education must address that centre on the question of standards. The external source of funding remains a main example of the paradox of local control (Burns, 1995; Goddard, 1993; Paquette, 1986). Bands are often said to hold hollow jurisdiction over education because of the fact that there are externally determined standards and criteria that must be met (i.e., criteria set by governmental or public school agencies). In many cases the criteria fail to address the needs of the body of students in question or the goals of the schools and First Nations of whom they are members.

Band-controlled schools typically must agree to implement education using provincial standards, but they must then decide how to address the fact that the majority of their school body will typically function at distinctly low achievement levels. The record of academic achievement in locally managed schools on reserves continues to be much worse than that of other Canadians, based on provincial criteria. Although Indian and Northern Affairs Canada reported in 1999 that the rate of on-reserve First Nations population gaining at least a high school education increased between 1991 and 1996,

still less than 20% of status Indians successfully complete Grade 12 (Auditor General, 2000; Canadian Education Association, 1984). Finally, the question remains, if fundamental changes have been made to create a mode of community-based education that meets the distinct needs of the community in question, should not First Nations be able to utilize an equally distinct measure of success (Calliou, 1993; Matthew & Kavanagh, 1999)?

Finally, the general quality of educational services delivered to Native children remains a major problem (Matthew & Kavanagh, 1999; Paquette, 1986). First Nations schools are not funded at a comparable level in relation to public schools and often find it difficult to provide the same degree and quality of service as public schools while running on a more restricted budget. The teaching staff of locally controlled school, for example, is often characterized "by a high turnover rate, low morale, and inadequate training" to teach native students. Although sometimes able to offer a competitive salary, bands have often been unable or unwilling to offer competitive benefit packages (Canadian Education Association, 1984, p. 19). Thus, bands are often not able to attract, much less retain, a quality staff of trained and experience personnel.

Education and Social Reform

The Royal Commission on Aboriginal Peoples (1996) succinctly outlined the connection between education and social reform that is inherent to the self-determination movement, stating that "Aboriginal peoples and nations need the right kind of education to make self-government a reality and a success" ("Education for Self-Government," ¶1). Education contributes to social reform by training Native people for the jobs that will sustain the nation and that will serve to safeguard and advance the use of their culture,

language, and funds of knowledge (Royal Commission on Aboriginal People, 1996).

Beyond the market view of education, however, the nature of the relation of education to the project of social reform has been widely debated (Calliou, 1993; Koens, 1989). This final section reviews several approaches to the question that have been applied to self-determination in the Canadian context.

Contrary to the ideal, communities are often not at the point where they can articulate a clear vision about what they want from education when the transition to local control occurs (Cardinal, 1977; Paquette, 1986). If it is true that the "goal of most First Nations schools is to prepare their student to live in two worlds, [and] that schools teach the skills needed to succeed anywhere, while also sharing cultural, language and traditional knowledge" (Royal Commission on Aboriginal Peoples, 1996, p. 18), then finding a consensus among community members as to how to achieve this balance, let alone find a viable means of realizing that balance *in situ*, is a major challenge.

Koens (1989) suggested that band views of local control usually involve a romanticized desire to insert a degree of "traditional culture" into the curriculum based on a somewhat limited, idealized vision of the past. But these attitudes expose a limited notion of the content of the actual, "lived" culture. He argued that this reified view of Native culture also lies at the basis of the federal government's devolution policies which, in practice, often lead to the creation of devolution plans that confuse assimilation with a system of local autonomy. The new school is then "confidently expected to reduce a plethora of educational problems including the chronic student absenteeism experienced prior to the assumption of local control" (p. 37). When such results fail to materialize, the notion of Native culture and identity is typically allowed to wither in favour of more

conventional approaches often based on a diluted version of the provincial curriculum (cf. King, 1987). Koens explored the possibility of introducing a curriculum for Native children that is grounded in the operant culture of the community and which, he argued, offers a greater chance of educational success by virtue of being grounded in the *de facto* realities and practices of the community in question. "This process is a precondition to a successful on-reserve, in-school experience. The community must have a publicly validated value system which, while being external to the school, is recognized and reinforced through the school" (p. 41).

Calliou (1993) placed her discussion against a description of the community school model developed by educators in North American since the late 1930s. In part the result of the historical experience of treaty negotiations, and in many cases stemming from their own political history, many First Nations have settled upon the community as the natural site for empowerment. The author defined *community* as a collective with a reason for its existence and, potentially, a shared vision of its future. "To have purpose implies that reasons have been considered and accepted as a basis for being" (p. 32). She argued that community schools—if they are to truly live up to that title—will have an important role to play in creating this sense of direction and vision.

In this model, community schools serve as a site where members are able to engage in direct, participatory democracy, the reengagement of all citizens in processes of dialogue and decision making. Community members are enabled to "identify needs, set priorities and organize appropriate educational measures to achieve common goals" (p. 35) through flexible and targeted popular education programs. In this way school also serve as vehicles for individual empowerment *within* the collective framework. "In

community education, a sense of identity will be initiated, renewed, or maintained as individuals live, work, play, and share together" (p. 33). In this manner community schools become a site of collective empowerment by assuming a stance of leadership in motivating individuals to solve the problems of everyday life in the community while attempting to forge a vision of that community's future. Although this degree of engagement may be difficult to bring about, given the traditionally hierarchical nature of schools and the often exclusionary manner in which local control comes into being, it is an integral part of the process of making the institution into a veritable tool in community development (Calliou, 1993).

Calliou (1993) suggested that lay and professional educators who are involved in the transition to band control need to be aware of the broader context in which takeover of education is taking place; namely, the role of community schools in the process of creating healthy communities and stable self-government. "The First Nations cannot expect citizens to learn about 'processes that will bring self-sufficiency to their communities' if educators do not comprehend the conditions and events of community self-government" (Calliou, 1993, p. 28). Paquette (1986) discussed the common experience of tension between top-down and bottom-up efforts to implement innovation in local First Nations schools. In a setting where innovation is critical to the attempt to meet the diverse and complex needs of Native children, he described the inertia and mistrust that meet most efforts to introduce innovation. "Left to their own devices as individual classroom teachers, most teachers will inevitably attempt to teach as they were taught" (p. 40). The contradictions between this attitude and the ideals that underlie self-determination movements in education are easily discerned.

Conclusions

For the previous generation of communities and their activists, success in education and the self-determination of First Nations were intimately linked (Cardinal, 1977; Indian Chiefs of Alberta, 1972). Self-determination "in and through" education, it was thought, would be easily realized once band-controlled schools were established that could provide curriculum grounded in local values, culture, language, and needs. However, once communities in fact regain that control, the experience of translating those ideals into reality can be daunting.

The process of building successful community-based schools that address the specific needs of First Nations children is an ongoing process. Although such programs must by definition develop in the local context, many of the challenges that First Nations face in reaching their goals are in fact common experiences in mainstream education. The following section examines prevalent directions being taken in the education of students with special needs that have emerged from the literature on cognitive education and motivation.

Educational Reform

The literature on current reforms in special education revealed many issues that parallel those being faced by First Nations as they work to develop successful local systems of education. Just as the inclusion movement of the 1980s and 1990s resulted in a growth of mutual understanding between the hitherto distinct streams of special and general education, so too have First Nations education and public 'mainstream' education much to learn from each other's experiences.

An initial theme in the literature concerns the question of how best to address the complex needs of the individual within the school setting. The "inclusion movement" of the 1980s drew attention to the fact that it is impossible to break the education experience of a child into components that can be addressed independent of one another. Educators at on-reserve Native schools have long recognized that the behavioural and motivational factors that shape a child's performance in school often originate from beyond the school walls (e.g., family violence, neglect, nutrition, and substance abuse; Alberta Education, 1982; Assembly of First Nations, 1990; Auditor General, 2000; Henning-Stout, 1994; National Indian Brotherhood, 1972; Royal Commission on Aboriginal Peoples, 1996). Schools must consider the task of engaging each of those facets that inform a child's ability to learn and grow—the myriad cognitive, affective, social, and physical—to the extent that they are able. Within an inclusive framework, student "growth" implies something more than mere intellectual development, something that involves the cultivation and empowerment of the individual.

A second set of issues concerns the relationship of the individual and society. Inclusion was initially phrased in terms of a reformulation of how mainstream society accommodated diversity in its midst (Biklen, 1989; Fullwood, 1990; Mithaug, 1998). As a microcosm of current society, the temper of social relations within integrated classrooms provides an indication of how any given community will answer that question. In this manner school reform is closely related to social reform. As discussed earlier, the question is of specific significance among First Nations, because community schools can be posed at the centre of efforts to build healthy and self-sufficient communities (Calliou, 1993; Royal Commission on Aboriginal Peoples, 1996). Further,

just as "self-determination" must include empowerment and autonomy at every level of local society to be meaningful, so too should reform of this nature occur throughout the school system as a whole.

This section outlines the general movement in North American public education towards inclusion and integrated classrooms. The history of the inclusion movement in Alberta is discussed and the characteristics of students who have been identified as being "at risk" at First Nations schools in Alberta profiled. Finally, the implications of school reform for stakeholders at each level of the school system are illustrated.

The literature discussed in this section reflected the move away from treating the challenges faced by students with special needs in isolation, towards dealing with the "whole child" in a holistic, systematic framework (Guess & Sailor, 1993). As argued above, this approach is particularly useful in the context of addressing low achievement among students in First Nations schools. The task of creating a viable education system that addresses the needs of First Nations children must start with basic conceptions of how children think, develop, and perform, while embedding those principles in the context of the particular developmental and social problems that children face in the band setting.

The Inclusion Movement in North America

The emergence of the inclusion movement is best understood in context of the historical treatment of diversity in North American education systems in general (Bunch, 1994; Hallahan & Kauffman, 1994; Winzer, 1996). Although the early approach of North American society to exceptional individuals was marked simply by exclusion and segregation, the course of the 20th century saw a gradual move towards a sentiment of

responsibility and duty in this regard (Bunch, 1994; Friend, Bursuck, & Hutchinson, 1998). Social recognition that certain groups should be exposed to educational or habilitative services led to the creation of a system of special education parallel to the regular education system, complete with its own specialists, bureaucracy, theory base, and institutions (Bunch, 1994; Friend et al., 1998; Slee, 1990; Sobsey & Dreimanis, 1993).

The 1950s saw the beginning of a period of comprehensive reform precipitated by ground-breaking court decisions and lobbying battles fought largely by parent advocates. These efforts succeeded in grounding the principle that "no person should be left out of the mainstream of society's opportunities because of race, poverty level, or disability" (Mithaug, 1998, p. 1) in the general civic psyche. Ultimately, this "inclusion ideal" would come to occupy a position on par with the ideal of equal freedom in the formulation of social policy. American reform included programs to help exceptional children "compensate" for their differences, differences that were at the time understood as the results of conceptual and experiential deprivation (Mithaug, 1998). In the context of the movement towards deinstitutionalization in many areas of social welfare, this period included the first efforts to "mainstream" disabled children into general education classrooms (Fuchs & Fuchs, 1994; Gartner & Lipsky, 1996; Hallahan & Kauffman, 1994).

Following two key court decisions and various state laws issued in the early 1970s, the United States Congress enacted Public Law 94-142 (the Education of the Handicapped Act), which guaranteed a free and appropriate public education for disabled children. The act highlighted the need for effective programs of intervention for every

child and included directives for comprehensive evaluations, the collaborative and individualized planning of intervention for each child in the form of individual education plans (IEPs), and continual monitoring of progress (Gartner & Lipsky, 1996; Hallahan, Kauffman, & Lloyd, 1999; Lewis et al., 1992). Although neglecting to stipulate a preferred model of service delivery for students with disabilities, the act indicated that students had the right to receive their education in the "least restrictive environment" possible or as close to the normative experience of the regular classroom as possible, given their special needs (Bunch, 1994; Gartner & Lipsky, 1996; Hallahan & Kauffman, 1994). The direction outlined by this act has served as the foundation for mainstreaming policies and programs in both the United States and Canada (Bunch, 1994; Friend et al., 1998; Gartner & Lipsky, 1996; Wiener & Manuel, 1994).

The relationship of special to general education became increasingly contentious throughout the 1980s as the harsh criticisms of segregated education emanating from parents, educators, and the media converged (Kamann & Perry, 1994; Vaughn, Moody, & Schumm, 1998; Waldron & McLeskey, 1998; Will, 1986; Winzer, 1996). The most common allegations were that segregated special education had failed to live up to its claims to provide differentiated and effective instruction for students with special needs (Fuchs & Fuchs, 1994; Hallahan & Kauffman, 1994; Lewis et al., 1992; Lovitt, 1993; Waldron & McLeskey, 1998) and that it is costly (Lovitt, 1993; Will, 1986), often inaccessible (Kamann & Perry, 1994), biased in its identification and placement practices (Gartner & Lipsky, 1996), and unethical in its reliance on segregation (Hallahan & Kauffman, 1984; Stainback & Stainback, 1996). These sentiments led to sustained calls for the rationalization of the relationship between special and general education during

this period (Baker & Zigmond 1990; Fuchs & Fuchs, 1994; Hallahan & Kauffman, 1994).

More recently, critics have gone further by encouraging the elimination of segregated interventions in favour of "full inclusion" (Bunch, 1994; Fuchs & Fuchs, 1994; Smith, Polloway, Patton, & Dowdy, 1995; Stainback & Stainback, 1996; Wiener & Manuel, 1994; Winzer, 1996; Zigmond & Baker, 1997). The position underlying this appeal is that it is preferable for students with special needs to attend the classes in which they would regularly have participated had they no disabilities at all. Theoretically, this "natural community" of students emulates the natural proportion of students with disabilities that occurs in the general population, mirroring and hopefully precipitating an ideal society founded on the values of equality and inclusion. All students, the argument goes, should be given the same opportunity within the home and general education settings. Special needs emerging as individual cases should be dealt within these same contexts, with the assistance of alternative teaching, programming, and service options (Hallahan & Kauffman, 1994).

Critics of inclusion, however, argued that ethical concerns have taken the place of a concern for providing an effective education for these students (Gallagher, 1995; Kauffman & Hallahan, 1995; Winzer, 1996). Winzer stated that "inclusion is at one and the same time a reform movement, a reflection of civil rights, a philosophy, and a practice" (p. 170). Ideological rhetoric can be found at the basis of arguments on *both* sides of the debate, however, quite often similar ideals being used to argue contradictory points (Gartner & Lipsky, 1996). Despite the fact that the inclusion movement declared its roots in the civil rights movement of the 1960s, for example, several key advocacy

organizations in Canada and the United States have voiced strong opposition to the notion of full inclusion on the grounds that it is a violation of civil rights and have cited federal legislation that guarantees students the right to education in the "least restrictive environment" (Council for Exceptional Children, 1993, Council for Learning Disabilities, 1993, Learning Disabilities Association of America, 1993; all as cited in Kauffman & Hallahan, 1995; National Joint Committee on Learning Disabilities, 1993).

The impact of this trend on the character of Canadian education has been substantial (McLeskey, Henry, & Hodges, 1998). The following section briefly outlines the literature which referred to the inclusion movement in Alberta.

Inclusion in Alberta

Public education in the province of Alberta has been moving towards integrated classrooms since the early 1980s. The Alberta School Act of 1988 opened the way to access and appropriate programming for students with special needs. Inclusion was adopted in special education policy by Alberta Education based on three suppositions: that integration in mainstream classrooms should be the first option for all students with special needs, that parents and students must be informed about the choices available to them and be actively involved in decisions related to placement and programming, and that alternative options should be available to meet the individual needs of students (Alberta Education, 1992b).

By the 1990s, however, certain barriers to the success of these initiatives were still apparent; among them, fragmented and uncoordinated services within school systems, inadequate funding, and inadequate preparation and support for teachers during the transition to inclusive schools. In 1991 a series of regional meetings were held to

discuss potential solutions to these challenges. Alberta Education established an Integration Advisory Committee which included representatives from parent and community groups, education associations, and government. Former Premier Don Getty assisted the establishment of the Premier's Council on the Status of Persons with Disabilities to provide direction as schools attempted to facilitate the "full and equal participation of all Albertans with disabilities in Alberta society" (Alberta Education, 1992a, pp. 1-13). Uncertainty during this period led to questions on whether integration was indeed the best option for all students, who should be involved in deciding what type of setting is best for a given child, the type of criteria that would be used to decide placement, and what role parents and students themselves should play in the process (Alberta Education, 1992b).

Defining the Population: "At-Risk" Students Among Albertan First Nations

Although there is a clear understanding of the immediate need for comprehensive funding and services for special needs at on-reserve First Nations schools, there is little research that has made explicit the extent and nature of "special needs" among First Nation populations in Alberta. The federal government itself reported that Indian and Northern Affairs Canada does not know the extent to which Native students with special needs are being properly identified and assisted. "Because of the reported lack in diagnostic expertise on reserves, we believe that the potential for under- and over-identification of these students is high" (Auditor General, 2000, p. 14).

Health Canada (1999) provided an indication of the array of challenges faced by young children in First Nations communities in the context of a survey conducted in 1999 that examined the accomplishments of the Aboriginal Head Start program in

communities across Canada. At the time, 96 of the 99 projects (representing a total of 3,236 participating children) in Canada participated in the survey. Survey results indicate that 17% of the children enrolled required greater than normal staff time due to a variety of special needs that were related to language difficulties, fetal alcohol syndrome/fetal alcohol effects, or emotional, behavioural or developmental delays. Respondents indicated that, at the time, they had few resources to meet the needs of children diagnosed with special needs. Further, when asked to identify general program needs, the majority of respondents called for training and resources to deal with special needs. As with special education, the federal government currently has no policy to provide early childhood education services to First Nations children with special needs under the age of 6 years (Health Canada, 1999).

A recent proposal for a funding formula for special needs submitted by Treaty 7 (the treaty region that includes most of southern Alberta) included results from a survey conducted in January 1994 to determine the estimated performance levels and current placement of elementary and junior/secondary students with special needs. Of 401 students identified with special needs in Treaty 7 schools, the largest sectors of special needs, in order, were those with speech and language impairments (161), those identified as having fetal alcohol syndrome (FAS) (79), and those categorized as having severe behavioural disorders (52). Other categories of special needs identified among smaller percentages of this population included gifted and talented students (31), students categorized as educable mentally handicapped (34) and as trainable mentally handicapped (14), and those with visual impairments (11; Treaty 7 Education Steering Committee, 1994).

The document discussed the fact that First Nations in Alberta have been stymied in their attempt to secure appropriate services for students with layered and complex special needs by the need to apply externally determined (provincial/federal) criteria to a very different local reality. Despite the unique characteristics, circumstances, and profiles of students with special needs, the lack of a comprehensive funding framework has forced school systems to focus on individual, compartmentalized needs that can be met under limited human and financial resources.

Keogh and Weisner (1993) have suggested that it is more useful to attempt to understand learning difficulties as one factor in a web of issues that place certain students at risk for academic failure. As previously illustrated, this perspective becomes all the more critical when considering at-risk students in First Nations schools, whose special needs are often multilayered, complex, and interdynamic. This review focuses on the one characteristic most common among students with learning difficulties, one that can be most readily addressed by persons in the school setting; namely, low levels of achievement. However, the discussion should be considered with the array of factors in which the problem is often embedded in mind.

This review focuses on research related to students with low levels of achievement rather than those who have been diagnosed with a learning disability per se. Learning-disabled students are themselves members of a diverse group that is notoriously difficult to profile due to the variety of defining characteristics within any given category, and because problems that individual students face often issue from overlapping categories (Borkowski, Estrada, Milstead & Hale, 1989; Laycock, 1980b). Further, a label itself will have limited use in the learning context, because teachers are ultimately

faced with performance levels, aptitudes, and affective state as opposed to any alleged cognitive deficit. "Preoccupation with categories can easily cloud the diagnostic process, leading educators to be more concerned with what the child *is* than what he can and cannot *do* at the present time" (Anderson, Martinez, & Schifani, 1980, p. 53).

Henry Levin (as cited in Chasin & Levin, 1995), of the Accelerated Schools Project, defined at-risk students as follows: "Such students started school without many of the skills that schools valued and they got farther behind the educational mainstream the longer they were in school. Over half of the at-risk population did not graduate from high school" (p. 131). With respect to research in cognitive education, *low achieving students* are often defined in relation to the performance-related challenges they face: challenges associated with a lack of foundational knowledge in a given area, a lack of acquaintance with a wide breadth of vocabulary, and a lack of available cognitive and metacognitive strategies (Belmont, 1989; Jones, Palinscar, Ogle, & Carr, 1987). Palinscar and Klenk (as cited in Borkowski, 1992) characterized these students as "having difficulty with intentional learning accompanied by impoverished understandings regarding the nature and demands of learning, a limited repertoire of strategic approaches to learning, and negative motivational attributions and beliefs" (p. 243).

Learning in the Least Restrictive Environment

The full "continuum" of service options implied by the prescriptive "least restrictive environment" was first presented during the early 1970s in Deno's (as cited in Hallahan & Kauffman, 1995, pp. 19-65) depiction of a range of placement options for students with special needs: from fully segregated institutions to the placement of choice, the integrated regular classroom (Lovitt 1993; Smith et al., 1995). Voicing the concern

that inclusive settings may not be the most appropriate option for *all* students, many other authors have since stressed the importance of maintaining a full continuum of service options (Fuchs & Fuchs, 1994; Hallahan et al., 1999; Kamann & Perry, 1994; Kauffman & Hallahan, 1995; Klingner, Vaughn, Schumm, Cohen, & Forgan, 1998; Kulik & Kulik, 1992; Lewis et al., 1992; Lovitt, 1993; Marston, 1996; Vaughn & Klingner, 1998; Wiener & Manuel, 1994; Zigmond, & Baker, 1995). What follows is a review of the discussion on one placement option that has been a mainstay service of many integrated schools—the resource room, an option that has proven itself adaptable to various challenges posed by the mainstreaming and inclusive movements.

The Resource Room Model

From the 1970s onwards, the resource room has been considered an ideal compromise between offering specialized attention to students with special needs in a segregated setting and meeting the stipulation of providing instruction in the “least restrictive environment” of the inclusive classroom (Hallahan et al., 1999; Smith et al., 1995; Vaughn & Bos, 1989). Over this period, the role of the resource room teacher has evolved to keep pace with trends in educational reform, leading to the present situation where the role of the resource room teacher, and the concept of the resource room model itself, are often somewhat ambiguous (Mattu & Janzen, 1991). Nonetheless, the resource room has been the primary service delivery option for students with disabilities since the late 1980s (Harris & Schutz, 1986; Smith et al., 1995; Vaughn & Bos, 1989; Zigmond & Baker, 1997).

Based on the principle that it is better to maintain each child as a participating member of the mainstream classroom, the resource room generally functions as a support

service that provides a wide range of services to the student while offering support to the general education teacher attempting to meet special needs. A student will typically spend most of his or her day in the regular classroom and attend the resource centre for typically 21% to 60% of the school day (McLeskey et al., 1998). The resource centre itself is usually a large room containing private and group instructional facilities and an array of equipment and teaching materials. The room will be staffed by one or more teachers with wide-ranging competencies, trained in special education.

Schedules are carefully coordinated through collaboration with general education teachers in order to ensure that only small groups of students attend at one time. Resource teachers provide direct support to these students through individualized instruction in areas of difficulty. Instruction may focus on remediation of basic skills or assistance in particular class subjects. Acceleration, for example, is a mode of instruction often used in this forum, "when clearly defined skill deficits are being remediated" (Harris & Schutz, 1986, p. 6). However, resource room teachers also assist students indirectly by consulting with general education teachers, performing assessments, meeting with parents, and developing appropriate instructional programs using IPPs. The resource teacher's role in itself is multifaceted and fairly demanding (Hallahan et al., 1999; Harris & Schutz, 1986; McLeod & Cropley, 1989; McNamara, 1989; Mercer, 1991; Reynolds & Birch, 1988; Smith et al., 1995; Zepeda & Langenbach, 1995).

Descriptions of resource room programs illustrate that they are often the site of considerable innovation. The shape that a program takes will be based on a variety of factors, including: the needs of the student body in question as perceived by teachers and administrators, the professional training and perspective of the resource teacher, the

resources available, and the history or orientation of the institution in question (Calder, 1990; Harris & Schutz, 1986; Kamann & Perry, 1994; Kaufman & Adema, 1998; McNamara, 1989). Programs may typically serve up to 30 or 40 students with needs in one area (categorical resource room programs) or several areas of special needs (cross-categorical programs); these areas include learning disabilities, behavioural problems, mild to severe disabilities, and giftedness. In some cases the room may be open to students needing assistance regardless of whether they are of special needs status or not (noncategorical programs; Eby & Smutny, 1990; McNamara, 1989). Kamann and Perry, for example, described one case in which a resource team was created in order to rationalize and eliminate the overlap in the array of special education services already present.

The literature questioning the efficacy of instruction in this setting is extensive but offers no consensus to date. An initial point of contention is whether it is possible to effectively instruct a classroom which includes students of various levels of ability. Marston (1996) reported that special education resource teachers who had experience of both inclusive and pull-out models were more satisfied with the combined services (i.e., resource room model) and pull-out settings (special classrooms) than with the inclusive classrooms in terms of the goal of meeting individual needs. Kulik and Kulik (1992), however, argued that the instructional setting is less important than what is accomplished in that setting.

Critics of the resource room model suggest that the difficulty of coordinating schedules and the curricula taught in the two settings often results in fragmented instruction, because there is no guarantee that individualized programs of instruction used

in one forum will be accommodated in the next (Meyers, Gelzheiser, Yelich, & Gallagher, 1990; Nugent, 1990; Smith et al., 1995). In a review of the literature on pull-out programs, Vaughn, Feldhusen, and Asher (1991) reported that many are ineffective because the interventions they offer are often incongruous with the curriculum taught in the mainstream classroom. The review concluded with a recommendation that attempts be made to articulate a comprehensive curriculum in such settings (p. 93).

For example, in a qualitative study Albinger (1995) found that children who attended resource rooms were often unsure of how they would be expected to complete assignments when they returned to the regular classroom or whether they would have to make up the work they missed (p. 618). In a study of the role of resource room teachers in Alberta, Mattu and Janzen (1991) reported that the generally ambiguous nature of the role that these teachers play often results in frustration when they attempt to coordinate special interventions with general education programs. Alberta Education (1992b) suggested that student progress should be coordinated through a consensus between classroom and resource room teachers (Alberta Education, 1992b). Finally, Meyers, Gelzheiser, and Yelich (1991) revealed that mainstream teachers found collaborative planning meetings more effective when the resource teacher was involved in in-class consultation rather than in a pull-out situation. In the former, meetings were more substantive, and teachers were able to do effective planning related to specific instructional issues and techniques and student progress and adjustment (Meyers et al., 1991).

A common criticism of pull-out programs such as the resource model is that it reduces time on task, as well as fragmenting the consistency of class time. However, Rich

and Ross (1989) illustrated that, when examining the amount of time that students spent on task in different learning environments, the resource room made more effective learning time available. When they examined allocated time and time spent on task, levels reported for the resource model were significantly higher than those found in more restrictive settings (e.g., special schools, special classrooms) and inclusive classrooms. The authors concluded that the resource model appears to be organizationally designed to maximize learning time (Rich & Ross, 1989, 1991).

Other researchers claimed that inclusive settings can be just as effective forums of instruction as resource rooms (Affleck, Madge, Adams, & Lowenbraun, 1988; Shinn, Powell-Smith, Good, & Baker, 1997; Waldron & McLeskey, 1998). In a study of the effectiveness of a reintegration scheme involving elementary school students with mild disabilities who had previously taken part in a pull-out reading group, Shinn et al. found that, on average, students made academic gains comparable with their classmates in the general education program. Similarly, Affleck et al. (1988) found that students in inclusive settings made improvements at a rate comparable to those of students in traditional special education classes. In another study of the effect of reintegration into inclusive classrooms of students with mild and severe learning disabilities, Waldron and McLeskey found that both sets of students made significantly more progress in achievement in reading and math than students who remained in the resource setting.

Although the underlying purpose of the model is to provide individualized instruction, Vaughn and Klingner (1998) cited cases where resource room teachers felt pressured to provide the same "whole-language" reading technique to a class of remedial learners; consequently, little improvement was made over the course of the academic

year. The authors argued that the resource room model cannot be expected to succeed in its objectives if teachers do not differentiate their teaching approach according to need. However, their criticism is less a condemnation of the model as a whole than a warning about ineffective programming.

To conclude, the research suggested that the *place* of instruction is less important than an acceptance of the need to incorporate the more effective teaching strategies used in the resource room into integrated classrooms (Hallahan & Kauffman, 1995; Lewis et al., 1992; Rich & Ross, 1991). The following section will explore a final theme that has emerged in debate on the efficacy of the resource room model: the social impact of inclusion and pull-out programs.

The Social Impact of Inclusion

The socialization component of inclusion in integrated classrooms was one of the cornerstones of the movement. However, this focus on children's actual experience of "special education" has also proven to be one of the most permanent criticisms of the movement. One of the main points of debate is whether pulling children out of general education classrooms will have a negative impact on their social and emotional development: What impact is there of being labelled with having a learning difficulty, and what stigma is attached to having to attend special classes and resource rooms? (Will, 1986, p. 412). With respect to the development of children with special needs, it has been argued that the already lagging social development of such children is further depressed by segregation and exclusion, in that they are deprived of the company of children who are not facing these impairments and who may act as learning models and helpers (Alberta Education, 1992a). Biklen (1989) described the emotional value of having

friends within the regular classroom for students with special needs; they "need to be allowed to be treated the least differently as possible" (pp. 262-263). By being given that opportunity, the notion that disabilities are things that can and should be "fixed" before they are allowed access to the "normal" classrooms is abandoned (Biklen, 1989; Fullwood, 1990).

The very rationale of the resource room model is that, by splitting class time between the regular and resource rooms, the social impact of segregation is kept to a minimum (Smith et al., 1995, p. 71). As opposed to the debate over acceleration, however, where the positive social effects of acceleration seem to be unanimously supported, research that examined the point of view of students on this topic has exposed many nuances on the issue of learning in the resource room that have not been fully disclosed by empirical research (Albinger, 1995; Bryan & Nelson, 1994; Guterman, 1995; Wiener & Manuel, 1994).

In a study conducted by Klingner et al. (1998; as cited in Noland, McLaughlin, Howard, & Sweeney, 1993), most students agreed that pull-out classes were better for learning, whereas inclusive settings were better for making friends. Other studies have declared that ability grouping has little effect on student's social self-esteem, but that the experience will differ depending on the student in question: Whereas gifted students may experience a drop in self-esteem after they are accelerated into a group of similar ability, the self-confidence of low-achieving students may improve slightly once they are removed from the general placement to one where their classmates experience similar challenges (Kulik & Kulik, 1992). Vaughn, Elbaum, and Schumm (1996) wrote that, although the self-esteem and levels of peer acceptance of students with learning

disabilities in inclusive settings are lower than those of their general education peers, they are in general no more lonely or less capable of making friends.

In another study, Albinger (1995) described a series of stories that elementary school children who attend resource rooms made up to mask the embarrassment that they associate with telling friends that they attend a special class. The low self-esteem that emerged in the stories was directly related to the children's understanding of what it means to have a learning difficulty. Although they did not always understand why they were going to see a specialist in the resource room, the children indicated that they liked coming to the resource room because of the small groups, individualized help, and generally lower levels of stress (Albinger, 1995). In a similar study, Guterman (1995) found that high school students in her sample had poor self-concepts stemming from difficulties they experienced in the learning context, but they had also developed personal mechanisms to minimize the impact of perceived stigma. In the end, students preferred attending a resource room over remaining in the general classroom, which they saw as even more inflexible and unresponsive to their needs (Guterman, 1995).

In a study of the perception of the resource room model by elementary students, Vaughn and Bos (1989) found that, although both students with and without learning disabilities had similar knowledge and opinions about the resource room, the grade level of the students made a difference in their perceptions: Younger students with learning disabilities seemed to hold a more negative view of the program than did older ones. Jenkins and Heinen (1989) illustrated that the reasons behind many children's preference for a certain delivery model often begin with considerations of embarrassment, but that this embarrassment may be felt in relation to both pull-out and inclusive settings. These

authors suggested that special educators have over-generalized the connection of stigmatization and pull-out programs. Wiener and Manuel (1994) indicated that the issue of stigma or embarrassment was mentioned by only 15 % of their sample of 67 elementary students and suggested that the issue will be of less concern to students at this age than when they get into high school. Finally, Whinnery, King, Evans, and Gable (1995) found little discrepancy between the self-esteem and self-concept of students with learning disabilities in resource rooms and inclusive programs. Attitudes differed, however, with respect to student attitudes towards the mainstream program: Students in resource room programs had a more difficult time feeling comfortable in the mainstream classroom.

The insights revealed in this literature have led many researchers to suggest that the points of view of students must be an integral part of the process of school reform when questions of what service models and instructional techniques will be provided are being raised (Albinger, 1995; Bryan & Nelson, 1994; Guterman, 1995; Whinnery et al., 1995; Wiener & Manuel, 1994). The final discussion in this section of the review focuses on literature that examined the transformation of schools undertaking restructuring, from the perspective of each main level of players and stakeholders: the school as an institution, teachers and support personnel, and parents.

A Community of Support

As discussed by several observers of school reform among First Nations, the inclusion of all stakeholders in the transformation process from its earliest stages is critical for the successful implementation and maintenance of the changes in question. When reform is directly related to provisions for meeting special needs, this approach

becomes all the more critical. The inclusion movement was based on the understanding that efforts to address children's intellectual, social, physical, and affective needs as part of a mutually dependent system will allow them to maximize their ability to engage and perform in learning (Battistich, Watson, Solomon, Lewis, & Schaps, 1996; Keogh & Weisner, 1993). Members of the school community need to be encouraged to take responsibility for meeting the needs of the whole child, rather than remaining responsible for the growth of one element of the self only. Further, the reform of a school community to effectively position all stakeholders to assume this new, challenging responsibility must involve these players to make the change successful. This section will outline the new expectations for each player typically posed by institutions undergoing restructuring to become inclusive schools.

Schoolwide Reform

The majority of studies under review suggested that, to be effective, reform must occur at the level of the school as a systematic whole (Biklen et al., 1989; Finnan, St. John, McCarthy, & Slovacek, 1996; Hopfenberg et al., 1993). Any given school's experience with restructuring reflects other aspects of its culture, especially as it relates to the principles that foster inclusion: a commitment to problem solving, an open style of interaction between students and teachers, a concern for affective growth and engagement as well as achievement, a sense of the school as a community, and the presence of a common direction and sense of organization (Biklen et al., 1989; Finnan, 1994). Finnan asserted that one of the primary reasons for the success of the Accelerated Schools Project, a movement that embodies many of these principles, is that it focuses on working within the culture of a school for change rather than against the grain. A second point of

strength lies in the process of reform itself, which allows all members of a school community to first come to an understanding of their own school culture (defined by Finnan as "a web of understanding that is agreed upon by members of a school community" [p. 37]) through teacher-led research, and then to engineer the changes that they find and agree are necessary.

School reform can be initiated at any level, but it must be enacted at the school level. The manner in which inclusion is implemented will, to a large extent, set the tone for how successfully it functions in the future. In other words, the vision of "inclusion" being actualized should also determine the mode of planning and implementation (Alberta Education, 1992a; Fullwood, 1990). All stakeholders must be involved on an ongoing basis. Rather than being passive recipients of a new policy, the more that teaching staff are involved in the process, the more effective the adjustment will be, because staff will be more likely to assume personal responsibility and ownership over the endeavour (Paquette, 1986).

Integration is often discussed as a process rather than a fixed state (Anderson et al., 1980; Fullwood, 1990). The leadership style of school administration often filters into the classroom and informs the degree to which classroom innovation and accommodation of inclusive principles are possible (Biklen et al., 1989; Fullwood, 1990; Rich, 1980). In the early stages of restructuring, the role of school leadership is to motivate and give direction in the initial stages. "Holding to a vision and communicating it over and over allows people many opportunities to join in" (Alberta Education, 1992b, p. 3). To be successful, restructuring should be based on a future vision of the school in which all stakeholders must play a part in defining. It is more appropriate to speak of

degrees of success rather than to equate the mere implementation of new measures with success (Alberta Education, 1992a). As in the malleable nature of the resource room model, the way that "inclusion" is realized will differ from school to school.

All schools, however, must address the issue of accountability toward students by attempting to develop measures of success that will stand up to standards at the community, provincial, and national levels. "How do we support diversity in a climate of increasing national standardization and accountability?" (Alberta Education, 1992b). Although local variability is the rule, balance must be found between national standards, provincial policies, and local flexibility in decision making (Alberta Education, 1992a).

Finally, research on restructuring has offered a clear indication of the new role expected of schools at an institutional level in meeting the needs of the whole child. Current literature on educational reform has often focused attentively on academic achievement and performance standards, but Battistich et al. (1996) suggested that such initiatives are in peril of forgetting that schools have, throughout history, had responsibilities extending throughout the various domains of personal development, including helping students to "develop the attitudes, skills, and orientations needed to lead humane lives and to act effectively as citizens to sustain democratic institutions" (p. 415). "The school is perhaps the only social institution that reaches youth from all of the diverse groups in society, and it serves as the intermediary between the intimate and particularistic relationships of the family and the more formal and pluralistic relationships of the larger society" (Durkheim; as cited in Battistich et al., 1996, p. 417).

Beyond this general mandate, Battistich et al. (1996) explained that the social expectation of schools' responsibility towards students has expanded in response to the

inclusion movement and general social pressures, even as they continue to fail disproportionately higher numbers of poor and minority children. "Improving academic performance thus requires that schools actively work to more effectively engage all students, but particularly those from backgrounds that traditionally have placed them disproportionately at risk of school failure" (p. 418).

Reflecting their experience with schools undergoing educational restructuring throughout the 1980s, Battistich et al. (1996) suggested that school transformation is not a simple undertaking. Reform ultimately involves a critical examination and bottom-up revision of all aspects of schooling. Students can no longer be viewed as passive recipients of knowledge provided by teachers and other authority figures, but "rather as whole persons with manifold needs and interests who actively seek to belong to a community, to make sense of the world, and to acquire knowledge for the purpose of applying it in their current and future lives" (p. 421; cf. Lupart, 1995). Therefore, schools must work to foster development in several areas beyond basic skills and general content knowledge, including social and ethical development, a commitment to education (attitudes and motivation towards school and learning in general), and metacognitive skills (the tools for lifelong learning).

Battistich et al. (1996) identified a convergence in reform research that combines an emphasis on high standards and high expectations for student achievement—achievement that in turn emphasizes student's active engagement in learning activities—and on a collaborative, caring, supportive, and participatory school environment. The approach includes several streams or directions of transformation. The first stream sees schools as functioning as veritable "school communities":

[A] feeling of belonging is viewed as essential for providing children with the stability and security necessary for healthy social and emotional development, and along with feeling competent or efficacious and autonomous or self-directed, belonging is considered a fundamental human need. (p. 420)

Drawing on Vygotsky's concept of zones of proximal development (Das, 1995), learning in this context provides extensive opportunities and supports for students in the formative stages of social and ethical development:

Students bring their diverse abilities and interests to bear on achieving learning tasks and resolving questions and problems and, in the process, help to bring learning goals within one another's . . . 'zones of proximal development,' and thus to 'scaffold' one another's learning. (Battistich et al., 1996, p. 421)

A New Role for Teachers

Several authors have noted that the ability of teachers to fulfill their role in meeting the needs of the whole child is critical to the success of inclusion (Kamann & Perry, 1994; Lewis et al., 1992; Nugent, 1990). Lewis et al. wrote that integration will work only as well as the teacher's attitude towards students with special needs. However, the pressure that is being placed on teachers to cope with the fleet of new buzzwords and concepts, to make new ideas work, and to do so in the context of budget cuts to education has also been duly acknowledged (Vaughn et al., 1998; Winzer, 1996).

The integration of students with special needs into general classrooms necessitates drastic changes to the styles of instruction and classroom management that teachers will have typically used in the past (Baker & Zigmond, 1990; Howard-Rose & Rose, 1994). General classroom teachers often do not have a special education background and face new frustrations when attempting to deal with the individual needs of special-needs students in class. A key quality to possess in this setting is an attitude of flexibility, because teachers may regularly be called upon to modify their expectations in response to

time constraints, movement, and the way in which students complete the tasks set before them. The need for teachers in inclusive classrooms to become more aware of differences in learning styles and needs is a priority (Albinger, 1995; Vaughn et al., 1998; Wenden, 1998). As Vaughn et al. demonstrated, without the effort on behalf of the mainstream teacher to accommodate the heterogeneous needs of students within the integrated classroom, the resource room model will be ineffective. A flexible approach to the concept of intelligence allows teachers of students with special needs to move beyond the pitfalls associated with categorizing and labelling. Continuous curriculum-based assessment for the purposes of curriculum planning in inclusive settings has been offered as an alternative to the emphasis on categorization or labelling (Feldhusen, Van Winkle, & Ehle, 1996; Stones, 1970; Will, 1986).

In this context a collaborative relationship with resource room staff becomes all the more important. The ability of teachers to cope with the larger numbers and more varied needs is contingent on the efficacy of collaborative teamwork between general and special education staff, specialists, administrators, and parents (Kamann & Perry, 1994; McNamara, 1989; Nugent, 1990; Reynolds & Birch, 1988; Smith et al., 1995; Vaughn et al., 1991; Winzer, 1996).

Meyers et al. (1991) reported that collaborative working relationships are likely to be most successful in the context of in-class servicing, in which teachers are forced to adopt new and clearly defined roles and shared responsibilities with respect to the incoming special educator (p. 14; Mattu & Janzen, 1991). Where teachers previously would have been more "in charge of their domain," they now must introduce elements of compromise to their approach as they enter into consultative relationships with resource teachers

(Whinnery et al., 1995). These authors also suggested that interventions of this nature are more likely to succeed when the teachers involved are encouraged to exercise their professional judgment in developing their own unique pull-in approach. "The sense of ownership that results from this approach to innovation may increase the probability that teachers implement the intervention effectively and that they continue its use" (Meyers et al., 1991, p. 14).

The specific challenges associated with defining the role of resource room teachers has already been addressed briefly. Resource room teachers will be most effective in the inclusive school when they integrate themselves and their skills and talents into the school system (Alberta Education, 1992a). The special education teacher is identified as a key figure in the implementation of inclusion, in that he or she can be used to coach regular classroom teachers in the prevention of teaching practices that serve to single out special-needs students within class (Alberta Education, 1992a).

Individualized program plans (IPPs) have been marked as a key tool in the effort to meet individual student needs by provincial and school-level policies nationwide (Alberta Education, 1992a; Odle & Galtelli, 1980). Laycock (1980b) described Individualized Education Plans (IEPs, the American equivalent) as a first step in the creation of programming in the "least restrictive environment" for students with special needs and suggested that these plans allow teachers to move away from categorical placement and teaching. The plans are typically written by a team that may include the child's teacher, parent, and other members of the school's support staff. They typically address the child's present level of performance, long-term goals and short-term objectives, how the instructional team will work towards each objective, program placement, and additional

services that will be employed to facilitate the program. However, Laycock also suggested that the effectiveness of an IEP ultimately depends on the attitudes of the teachers and administration involved and their ability to see the program implemented.

The literature also drew attention to the frustration that many teachers in inclusive classrooms feel concerning the difficulty of balancing support for special academic needs with blanket demands by school and provincial policy for achievement (Howard-Rose & Rose, 1994). Teachers find it difficult to reconcile the pressure they experience to deliver curriculum-based programming at grade level with the need to provide instruction at the skill level and pace that a given student with special needs may need. Advocates for the placement of students with special needs in segregated classrooms often base their criticism of inclusion on the difficulty in achieving such a balance (Meyers et al., 1990).

Research indicated that a students' affective state in class is informed by the degree to which the learning environment is perceived as nonthreatening, predictable, and engaging (Ames, 1992; Howard-Rose & Rose, 1994; Rich, 1980; Van Bockern & Wenger, 1999). Teachers create effective learning environments by communicating clear expectations for task performance and evaluation and by subsequently performing checks in this regard. The teacher's expectations for student behaviour must also be made explicit and consistently maintained in order to render the environment predictable (Ames, 1992). Teachers may also be faced with the necessity of reducing the complexity of the classroom environment. In order to deal with the bombardment of stimuli in the class setting, teachers will have to employ coping techniques which emphasize order and focused interaction when the class is engaged in non-collaborative teaching. Other desirable attributes include having a positive attitude, a planned instructional approach, the ability to

be flexible, consistency, and empathy (Rich, 1980). Finally, a teacher's leadership style will play a large role in the creation of an environment that is conducive to learning. Teachers who use an authoritarian approach to promote achievement may find that, although that may be appropriate for some students, an alternative style which permits students to have more control may be more conducive to encompassing a wider variety of student learning characteristics (e.g., student affective concerns; Rich, 1980).

Van Bockern and Wenger (1999) argued that, in learning environments that are perceived as threatening or stressful for whatever reason—test anxiety, fear of bullying, a poor sense of ability—students will learn less overall simply because the brain is less able to execute higher order thinking when the hormones associated with stress are activated. “Self-regulation and control are difficult for a child whose brain has been, or is being, flooded with stress hormones” (p. 212). These authors listed a variety of simple strategies that teachers can use to create safe, secure environments, such as calling students by their names, having them help to construct the classroom's physical environment, and setting out coherent routines. Upon such a foundation, the authors suggested that an effort to build a program that is meaningful to students and that reflects their lives or future in the community will help to create the optimal learning environment (Van Bockern & Wenger, 1999).

The second stream identified by Battistich et al. (1996) in successful school reform is support for the fostering of strong relationships among all persons in the school community: teacher and student, students, school and students' social sphere, and so on. Teachers need to create an environment that fosters positive interpersonal interactions, but also to teach the skills that students need to act in kind and respectful ways. The authors

suggested various ways to allow students to develop empathy and understanding and the skills to deal with socially stressful and negative situations. Teachers must attend to the social and ethical dimensions of learning, teaching students to be aware of the reasons for rules. They must also hold a "believing stance" towards all students, an unfailing belief that their students want to learn and want to form caring relationships with teachers and students. Teachers must understand their role in encouraging students to actively construct meaning in all experiences at school and in assisting them in developing their thinking about social, moral, intellectual, and physical matters (Battistich et al., 1996).

Certain authors also recommended that schools provide research-based professional development experiences for teaching staff on a regular basis on topics specifically targeted to teachers' needs (Vaughn et al., 1998). In-services should provide a link between theory and practice by offering training in practices found to enhance learning: teaching that is content specific; encouraging higher level thinking skills, cooperative learning, and peer tutoring; using IPPs; effective classroom management; training for collaboration; interpersonal and small-group skills; computer-assisted instruction; and models for assessing their own instructional behaviours (Alberta Education, 1992a). More ambitious professional development opportunities will represent a move from off-site "training" to on-site, ongoing, participative inquiry, where information is embedded in examples to which teachers can relate (Alberta Education, 1992b).

Administrators will need to have a realistic understanding of what the structural changes to be made imply from the teachers' point of view. New class sizes, an increased work load, and the human resources assigned to each setting will affect the feasibility of restructuring endeavours (Alberta Education, 1992a; Howard-Rose & Rose, 1994).

Teachers will need the support of a full school-based team, reflecting the degree to which community involvement is critical to a successfully integrated school system. Specialists will be needed to fulfill certain functions, and teacher assistants and resource teachers will be needed for others. This collaborative, team-approach becomes difficult, however, if special education and regular classrooms are perceived as separate, based on separate values. Inclusion must be adapted in a context of reform throughout the school as a whole, to avoid a situation in which teachers perceive themselves as working in different camps at cross purposes (Alberta Education, 1992b).

Finally, these extensive provisions for support should be integral to the process of transition itself (Alberta Education, 1992a; Fullwood, 1990; Paquette, 1986). Teachers must be prepared for the transition from the earliest stages to keep at bay feelings of being unfamiliar or uncomfortable with the changes being made. In an examination of six newly integrated schools in a school division in southern Alberta, the majority of teachers who were asked indicated that they felt they did not have enough input or communication with the *de facto* decision makers throughout the transition process (Alberta Education, 1992a). Paquette described the difficulty of implementing innovation in a school atmosphere in which teachers feel that innovation is neither feasible nor desirable, feelings that are often based on a lack of knowledge or understanding or resentment due to a perceived lack of involvement. Therefore, restructuring initiatives should occur in a setting based on bargaining and mutual adjustment (Paquette, 1986; cf. Ysseldyke, 2001).

A New Role for Parents

Although parental attitudes regarding inclusion may vary, their participation in the process is crucial to student success in inclusive settings (Alberta Education, 1992a; Day, Borkowski, Dietmeyer, Howsepian, & Saenz, 1992; Fullwood, 1990; Merlin, 1997; Rimm & Lovance, 1992; Will, 1986). Research indicated that student academic performance is enhanced by parental involvement, particularly among First Nations (Keith et al., 1998; as cited in Geenen, Powers, & Lopez-Vasquez, 2001).

Parental participation may be even more important for students with special needs from culturally or linguistically diverse backgrounds. Collaboration between the home and school domains may bring about higher awareness and responsiveness to the behaviours, roles, and goals of a given culture or community (Geenen et al., 2001). However, similar to impediments to participation among Native parents, there are structural and historical impediments to parental involvement in mainstream schools with which any attempt at school reform must contend. Canadian parents of exceptional students have not been as active in advocating inclusion as have their counterparts in the United States. In inclusive schools they have generally been "involved" only to the extent of providing permission for formalized assessment and for placement (Alberta Education, 1992a).

Parents' willingness to participate in school initiatives, regardless of the perceived benefits, is often characterized as the product of a lack of understanding of the role they play in their children's education, unpleasant memories of their own experience at school, or mere apathy (Alberta Education, 1982; Department of Indian Affairs and Northern Development, n.d.; Royal Commission on Aboriginal Peoples, 1996). However, Geenen

et al. (2001) have suggested that this characterization may better reveal a lack of understanding of the role that parents do fulfill outside of the school domain. In an examination of the role that parents from disparate ethnic groups play in transition planning for children with special needs, the parents described themselves as far more involved in preparing their children for adult life than did school professionals. However, the activities in which parents were typically involved fell outside the school domain, including assisting their children to find paid or volunteer positions, assisting them to prepare for postsecondary education, assisting them to find out about adult support services and social assistance programs, and teaching them about the cultural values and beliefs held by their family and ethnic group.

These results allowed a very different understanding of participation and involvement to emerge, leading researchers to conclude that "for many [culturally and linguistically diverse] families, the 'launching' of a young person into adulthood stems from family and community rather than experiences provided by educational or other formal institutes" (Geenen et al., 2001, p. 279). Among First Nations, for example, families who adhere to traditional values may be more inclined to view this transition as embedded in the interconnected fabric of support provided by immediate family, extended family, and more informal community-based networks. The authors argued that the fact that schools tend to define participation and collaboration within the school domain contributes to a misunderstanding of "the true pattern of involvement and create[s] a skewed picture of passivity among [culturally and linguistically diverse] parents" (p. 279).

Greenen et al. (2001) identified several barriers to parental participation in the school sphere and suggested that if parents perceive a lack of empathy and understanding for the needs of their children among school staff, they are more likely to withdraw from involvement in the school in general. The authors suggested that these findings indicate that a broader understanding of family beliefs, values, and activities within domains external to the school should be developed by school personnel seeking to meet special needs in the inclusive setting. Finally, teachers should be given the opportunity to learn how to support the roles in which parents are currently engaged, rather than insisting upon a role that is inconsistent with cultural norms.

Conclusions

Many authors have written that it is better to consider that it is mainstream education that is being reformed, rather than "special education" per se (cf. Kaufman & Adema, 1998; Levin, 1996; Sobsey & Dreimanis, 1993; Southern & Jones, 1992; Will, 1986; Zigmond & Baker, 1995). For example, several researchers who were generally supportive of the resource room model as an option in inclusive schools concluded that strategies associated with that setting would better be incorporated into the integrated setting (Hallahan & Kauffman, 1995; Lewis et al., 1992; Rich & Ross, 1991). The term *adaptive education* was invoked by Sobsey and Dreimanis (1993) to describe the delivery of special education services in general education classrooms as stipulated by individualized programming needs. In another article, Kaufman and Adema described an inclusive learning program called the Learning Support Centre which, although manifesting many characteristics of the resource room model (flexibility, targeted instruction for students with special needs, the use of an individualized education

program), also promotes innovative instructional methods such as cooperative learning, the use of volunteer and peer tutors, and team assessment. Simply put, these authors suggested that instructional and managerial practices that stress individuality and flexibility would be a benefit to all children. "The problem is not ability grouping but rather a lack of flexibility and imagination in the application of educational principles in practices" (Van Tassel-Baska, 1992, p. 70; Nugent, 1990).

In a special edition of the journal *Learning Disabilities Research & Practice*, researchers called for a more holistic and dynamic approach to addressing the development of at-risk children with learning disabilities (Keogh & Weisner, 1993; cf. Guess & Sailor, 1993). Keogh and Weisner wrote that the environment in which a child lives should be viewed as a complex set of cultural-environmental conditions that influence families and their children's development and that, for this reason, specialists should work to address the issues which face at-risk children in a collaborative and holistic manner. This underscores the notion that disability is never experienced apart from its social and cultural context: "Disability derives its meaning from the ways people respond to it, interpret it, and experience it" (Biklen et al., 1989). Reform that brings about the creation of an inclusive school in effect creates an extension of those places where people generally feel safe and normal (namely, self-definition and family relationships), by virtue of a decision to accept difference as a matter of "normal," everyday life (Biklen, 1989; Fullwood, 1990).

Restructuring can result in a sense of belonging, of being invested in a social setting, of interconnectedness and shared values and beliefs; in other words, a sense of community. In this manner, school reform based on the principles of inclusion becomes a

matter of social reform that implies individual empowerment while providing opportunities, from the initial stages of collective planning and goal setting, for collective empowerment (Fullwood, 1990). "Integration means not just being together but doing activities together. It is not just polite attendance at a community or participation in its activities; it also implies interaction and interdependence between community members" (pp. 118-124). Interdependence can, in this way, become a platform for collective social actions, of particular significance within the process of attaining self-determination.

The next section of the review examines literature from cognitive and psychological education that suggested what instruction in the inclusive classroom should involve.

Instruction in the Context of Reform

During the past three decades significant advances have occurred in cognitive and educational psychology that imply a new approach to instruction and learning that is couched in a holistic understanding of the way that children's thinking and performance develop (Borkowski, Johnston, & Reid, 1986). This mode of instruction was also implied in the context of the discussion on "appropriate instruction" for individual students, reflecting a new professional norm based on a concern with accountability (Gage, 1970; Howard-Rose & Rose, 1994; Laycock, 1980a, 1980b; Rich, 1980; Van Bockern & Wenger, 1999).

This section reviews current research on the place of cognitive and metacognitive instruction in effecting what is often considered to be the ultimate goal of the teaching enterprise: to bring about the development of self-regulated learning in all students. The literature to be reviewed discusses how these modes of instruction engage not only a student's cognitive abilities and proclivities, but also the affective (i.e., motivation, self-

concept, interest, engagement) and social (i.e., teacher-student relations, peer relations) components involved in learning. Ultimately, this section will highlight those aspects of cognitive and metacognitive instruction that lead to the growth of students with special needs as self-regulated learners.

Cognitive Perspectives on Learning

Current literature in special education revealed a variety of orientations that stem from fundamentally different conceptions of intelligence, development, teaching, and learning. Behavioural theory has remained significant to classroom practice (e.g., motivation and incentive systems), relying on the premise that there is an essentially causal relationship between behaviour and environment (Rohwer, Ammon, & Cramer, 1974; Skinner, 1970, 1974). In this perspective, teaching becomes a matter of increasing the probability of eliciting the desired response to certain information in students by exposing them to "contingencies" in the environment that reinforce the correct behaviour and by building on past learning experiences (Jones et al., 1987; Rohwer et al., 1974; Skinner, 1970, 1974; Thorndike, 1971). The stimuli to which students are exposed can include anything from teachers' movements and demeanour to the physical and social conditions of the school setting (cf. Thorndike, 1971).

Despite its lasting role in classroom and instructional management, behaviourism has been criticized for evading the task of attempting to understand *how* we learn; by focusing exclusively on the output of a given learning task, it ignores the internal cognitive processes leading up to it that are moulded by the process itself. Put another way, behaviourism ignores the process of learning by focusing on the application of the stimulus-reaction-reinforcement schema to teaching practice (Leont'ev & Gal'perin,

1970). Behavioural theory also assumes that intelligence is both easily quantifiable and an innate quantity that schools and individuals can do little to modify (Henderson, 1976; Skinner, 1974). In such a perspective, students are effectively characterized as passive receptors in the learning process.

In comparison, a cognitive approach to instruction focuses on how children think, and how their thinking changes with age and experience. In contrast to behaviourism, cognitive theory assumes that the individual's behaviour is always based on cognition (an act of thinking or knowing about the current situation), rather than on the situation itself (Rohwer et al., 1974). "Cognitive structures" may be thought of as relatively stable, organized ways of thinking that manage the transformation of the wide array of information they receive. In this framework, intellectual development is conceived as a series of changes in a child's cognitive structures which occur through equilibration (a process through which the individual constructs new and more efficient ways of thinking by applying or refining his or her previous ways of thinking), with each change characterizing a qualitatively different stage of development (Rohwer et al., 1974; Siegler, 1998).

Several authors regarded cognition and cognitive development as constituting a dynamic, complex system. In this context it is more accurate to examine the development of relationships between mental functions than the individual functions themselves (Das, 1995; Jenkins, 1971). Much of the classical literature on cognition, for example, has focused on the relationship between the development of language and of thought processes, especially during early childhood (Das, 1995; Liublinskaya, 1970; Luria & Yudovich, 1970; Maier, 1982; Vygotsky, 1970). Vygotsky pointed to the dynamic

relationship between word meaning and thought: Thought is not expressed merely by using words, but also comes into being through them. Word meanings change over time as the child develops and, while doing so, also affect the ways in which the child's thought functions (Siegler, 1998; Vygotsky, 1970). For example, the development of language enables children to compare, discriminate, abstract and generalize between those objects perceived by the senses. Without language, children are able to discriminate between objects at the perceptual level only (Liublinskaya, 1970).

Luria and Yudovich (1970) also presented language as a tool of socialization, discussing the manner in which language transmits the "experience of generations" through knowledge and concepts. Language transmission involves in the child a basic reorganization of the child's basic mental processes (structure), which in turn recreates the reality (or frame of reference) of the child. In such a way, language functions to reaffirm social patterns of behaviour (Luria & Yudovich, 1970).

Learning has been described as the application of a variety of cognitive processes that demonstrate the flexibility of human cognition (Siegler, 1998). Jones et al. (1987) defined *learning* as "thinking . . . using prior knowledge and specific strategies to understand the ideas in a text as a whole or the elements of a problem as a whole" (p. 5). Within the cognitive framework, learning is not so much based on perception and reaction (as implied by behavioural theory) as the application of a combination of internal and overt strategies. A *strategy* can be defined as a specific procedure or way of executing a given skill, where *skill* is defined as a mental activity that can be applied to specific learning tasks (Jones et al., 1987). The mastery of knowledge is understood to

occur when strategies and operations (processes) that correspond to a given body of knowledge are mastered.

Several authors have asserted that teachers must base their instruction on the sequence of basic cognitive processes, while taking into account the cognitive aptitudes of individual students (Bruner, 1970; Gage, 1970; Hilgard, 1970; Jones et al., 1987; Wilgosh & Mulcahy, 1993). Gage wrote that instruction is "cognitively valid" when the teacher possesses a sense of the systematic cognitive structure of the concepts and principles that he or she is trying to teach. Bruner wrote that the degree to which a body of knowledge is presented using developmentally-appropriate scaffolding will have a direct impact on the ease to which the student is able to achieve mastery of the material. Teaching instruction should be presented in a manner that preserves the processual character of knowledge, in a manner which allows students to master corresponding cognitive processes at the same time as the content (Leont'ev & Gal'perin, 1970). Finally, several researchers have suggested that effective instruction must also include an attempt to accommodate the diversity of learning modalities present in the classroom; this concept speaks to learning challenges as well as preferences (Laycock, 1980a; McEwan, 1992).

Cognitive researchers have also suggested the manner in which learning and cognitive development are interrelated. Several theorists have attempted to chart the developmental nature of learning: Gagné (1970) and Bloom (1956), for example, each produced taxonomic models that describe the cognitive processes that are refined at successive developmental stages of learning (cf. Ausubel, 1970; Gage, 1970; Stones, 1970).

Transitions in cognitive structures are said to occur in a state of flux rather than stability (Graham & Perry, 1993; Siegler, 1994). Graham and Perry found that the specificity with which children explain a given concept will reveal when a given knowledge base is in a state of flux. When children are in a state of disequilibrium, for example, their knowledge is unstable: "The child's current construction of the world no longer explains his or her experiences with the world" (p. 779). In such a state, the child will become vague and inarticulate when asked to talk about the given body of knowledge.

The Concept of Transfer

Although learning occurs in stages, it is also recursive in nature, in that it involves the organized marriage of new to prior knowledge (Jones et al., 1987; Melot, 1998). Several authors have argued that effective learning can be said to have occurred when a student is able to transfer a given strategy from more familiar contexts to a new situation; this process is alternately called *transfer* or *generalization*. Deliberate strategy use becomes essential in the context of transfer tasks, where decisions about the implementation, monitoring, and revision of strategies need to be made (Borkowski et al., 1986; Lupart, 1995; Paris & Winograd, 1990; Perkins & Salomon, 1989).

Research devoted to the transfer concept is far from conclusive on how to bring it about. In terms of strategy instruction, for example, although some believe that it is better to instruct students in general skills that can be used in a variety of problems and situations, others maintain that strategies are best acquired in the context of content-specific information (Jones et al., 1987). On the other hand, Perkins and Salomon (1989)

suggested that the distinction has been overplayed and that a synthesis of general-application and content-specific approaches to strategy instruction be sought.

Lupart (1995) argued that students' ability to transfer skills and knowledge is tied to their ability to be self-regulated in the learning context. Lupart grounded her study of transfer and students with learning difficulties in the context of the "interactive effects of the full range of learner characteristics and differences" (p. 216) and argued that teaching for transfer must be founded on an understanding of learning and learners as dynamic, as opposed to passive recipients who either "have" the capacity to learn or do not. Citing the work of Borkowski and his associates, Lupart suggested that a focus on self-regulation redirects attention from static distinctions of intelligence that are debilitating to teachers when faced with students of "exceptional" intelligence to how individual students learn and can be taught to self-regulate. "Their guiding concern is not whether a student having difficulty in the classroom is mentally handicapped or learning disabled, but if the learning environment they have created maximizes the student's self-regulated learning" (p. 218).

Lupart (1995) discussed the ambivalence of research related to the issue of transfer among students with learning disabilities. She stated that students under this label can clearly be distinguished from other students only on the basis of typical patterns of school performance: first, low levels of achievement when compared with same-age peers, particularly in reading and math; second, a learning pattern that involves very slow initial intake with a subsequent increase in learning rate (the mirror opposite to that of "normal" students); finally, a failure to transfer learning to new situations. Recent directions in research have shifted from a search for a global cause of learning disabilities

to "the notion that performance may be situation specific and might change substantially depending on the interactive effects of task demands and student ability" (Lupart, 1995, p. 224; cf. Perkins & Salomon, 1989). Strategies taught to students with learning disabilities will be transferable within the same class of events that depend on a particular cognitive skill, but not to tasks in a different class of events.

Lupart (1995) called attention to the

consistent finding that although students differ substantially in terms of the architectural systems that limit or enhance overall learning propensity, executive systems can be markedly improved through effective instructional intervention to promote intelligent behaviour and school achievement. (p. 220)

Examining assumptions about intelligence among students with development delays, she suggested that training in self-regulated behaviours will need to map out the flexible manner in which the multiple factors of self-management (i.e., knowledge base, strategic awareness and experience, formal and everyday learning, etc.) interact. Such training should involve explicit instruction and practice opportunities that involve applying self-regulated behaviours in multiple tasks and contexts.

Metacognition

Metacognition refers to one's awareness and regulation of one's own cognitive states and processes. In an exposition on the metacognitive concept, Nelson (1996) illustrated how a single process can be analyzed at two (or more) separate levels: at an object level, where cognition occurs that is concerned with external objects or situations; and at the meta level, where cognition occurs *about* cognition. *Monitoring* occurs when information about the current state of the object level travels to the meta level. It refers to the ability to supervise and direct the success of the task at hand, an effort which involves

learners' ability to motivate themselves, manage time effectively, and attribute the successes and failure they experience in a positive and appropriate manner. *Control*, on the other hand, occurs when information flows from the meta level to the object level, informing it on what to do next; this includes not only knowledge of specific strategies, but also how and when to use them (Borkowski, 1996; Jones, Palinscar, Ogle, & Carr, 1998; Nelson, 1996; Wenden, 1998). Metacognitive strategies differ from cognitive strategies in that, whereas the latter is a procedure used to achieve a particular task, the former will be invoked by the individual because he or she has reason to believe that a particular strategy is more likely to result in success than another (Corkhill, 1996; Malicky, Juliebö, & Norman, 1994).

Despite the prolific literature that has emerged since the introduction of the concept over 20 years ago, it is difficult to discern the body of research as a whole because there seems to be little consistency in the treatment of the concept (Borkowski, 1996; Corkhill, 1996; Reder, 1996). Many examples of current research addressed only one of the many components identified with metacognition, "with the result that the reader finds it difficult to gain an adequate appreciation of the many sides of metacognitive research and their relevance to one another" (Corkhill, 1996, p. 277).

Reder explored current literature to discern whether research has treated metacognition as a shifting concept in the study of cognition and developmental psychological phenomena or whether it has been examined as different aspects of the same phenomenon. She found that certain elements that have been accepted as part of the metacognitive configuration are qualitatively different from the others (e.g., self-regulation, which can occur without

conscious awareness). She suggested that the term has been used by different researchers to refer to different collections of behaviour.

This section reviews literature on metacognitive theory as it applies to the development of metacognition, the significance of metacognition to the process of learning (particularly with respect to low-achieving students), and the place of metacognitive instruction in the classroom. For the most part, the review will focus on the work of Borkowski and associated researchers (Borkowski, 1992, 1996; Borkowski, Carr, Rellinger, & Pressley, 1990; Borkowski et al., n.d.; Borkowski et al., 1989; Borkowski, Johnston, & Reid, 1986; Carr, Borkowski, & Maxwell, 1991; Day et al., 1992; O'Sullivan & Joy, 1994; Pressley, Borkowski, & O'Sullivan, 1985).

Metacognitive ability, "requiring deliberate, conscious, goal-directed activity" (Borkowski et al., 1986, p. 150), develops throughout childhood as experience is acquired. Therefore, metacognitive theory includes reference not only to metacognitive *awareness* (what individuals know about the cognitive processes of themselves and others), but also to metacognitive *experience* (metacognitive control or self-regulating strategies; cognitive and affective experiences that relate to some current or ongoing cognitive effort).

Malicky et al. (1994) examined the development of metacognition in young children. The team sought to validate Vygotsky's (as cited in Malicky et al., 1994) argument that verbal mediation by a teacher will "lead to the conscious realization and deliberate use of [the student's] own mental operations" (p. 5). Research involved examining whether Grade 5 students who had been identified as "at risk" and who had participated in a training session where metacognitive strategies (related to identifying,

rehearsing, and explaining concepts) had been introduced would spontaneously evoke those strategies while attempting to solve various literacy tasks. During the second year of the intervention, students displayed a wide range of metacognitive behaviours and exhibited twice as many occurrences of such behaviour in the follow-up sessions as during the intervention lessons. Although self-regulation figured most prominently in intervention lessons, strategy/procedural knowledge (e.g., the use of picture cues and letter sounds to identify words, the use of letter cues and context, etc.) was the most frequent category witnessed in the retrospective session. The authors concluded that "from an examination of strategy/procedural knowledge displayed by the children in this study, [students] were becoming interactive readers with a well-balanced use of both print-based and meaning-based cues" (p. 11). They interpreted their findings as explicating Vygotsky's notion that as children learn to read, they are essential players in a process of forming new concepts. "Learning to direct one's own mental processes with the aid of words and signs is an integral part of concept formation" (Malicky et al., 1994, p. 12).

In this context, highly skilled learners are those who have prior knowledge *about* learning and memory processes, who are aware of their efforts to use particular skills and strategies, and who make explicit efforts to control these processes (Landine & Stewart 1998; cf. Borkowski, 1996). Conversely, "specific learning disabilities in learning disabled children are, in part, attributable to failures in the implementation of task-appropriate strategies, rather than deficits in memory or attention *per se*" (Pressley et al., 1985, p. 9). Borkowski (1996) and Borkowski, Carr, Rellinger, and Pressley (1990) identified discrepancies in the development of executive metacognitive processes, the

ability to transfer and motivate patterns that may account for the lower levels of performance of students with learning difficulties. Using the model of metacognition that he and his associates have developed, Borkowski et al. (1989) suggested that there are deficiencies in three possible areas that are associated with the problems of information processing, transfer, and self-regulation in general of students with learning disabilities: neurological impairments; deficiencies in general world knowledge; and negative beliefs, attitudes, and styles that limit self-efficacy (Borkowski et al., 1990; Borkowski et al., 1989). "Deficiencies in one or both processes (i.e., self-regulation and motivation) likely account for many of the individual differences that separate . . . regular children from learning impaired children" (Borkowski, 1996, p. 395).

Metacognitive instruction will generally involve explicit direction in strategic thinking, as well as instruction that leads students to understand the meaning of the tasks at hand, how to approach them, and any number of task-specific goals for a given learning context (Borkowski et al., 1986; Corno, 1986; Jones et al., 1987; Wenden, 1998).

In an article examining the integration of metacognitive training and experience, Melot (1998) examined the ability of six- to nine-year old children to study and recall categorized items after receiving feedback on their strategy use and recall performance. The study illustrated that children who were able to effectively re-elaborate the information provided during feedback were more likely to apply the metacognitive knowledge they had just acquired in subsequent tasks, demonstrating that they had not only retained the strategy, but had also fully integrated it into their self-regulatory behaviour in the learning context. The author also suggested that the degree to which

students received metacognitive training prior to their participation in the study played a significant part in determining their ability to re-elaborate metacognitive experiences during the study; and therefore their ability to integrate the new knowledge (Melot, 1998).

This latter point speaks to the argument that metacognitive training will prove most effective when provided as a consistent mode of instruction throughout the early years of school (cf. Borkowski, 1996). Pressley et al. (1985) came to a similar conclusion in the context of a review of research that examined the ability of students among various populations of "special learners" (including impulsive, gifted, and learning disabled students) to transfer strategy knowledge after being exposed to metacognitive training. Transfer was more common when students had metacognitive knowledge that predated the study sessions in question (Pressley et al., 1985).

Assessment and Evaluation in Cognitive Education

Thorndike (1971) wrote that the "application of scientific procedures to education will make it a more rigorous and effective discipline" (p. 22). Although standardized tests of intelligence have been a constant cause of controversy since their introduction in the early 20th century (Henderson, 1976; Weinberg, 1989), standardized assessments of ability and achievement have regularly been applied in the context of programming for students with special needs, particularly in the context of inclusive schools (Alberta Education, 1992b). In general, cognitive research has been diligent in responding to criticisms of standardized tests by attempting to refine those aspects of assessment that have proven most contentious (cf. Ames, 1992; Henning-Stout, 1994; Laycock, 1980a;

Wilgosh & Mulcahy, 1993). This section reviews research on the current use of standardized assessments of intelligence and achievement in special education.

Critics have held that the results of standardized achievement and ability tests have too often been used to place a diagnostic label on a student, reducing the challenges that a student faces to an all-out reduction of the student. Biklen et al. (1989) described, for example, how standardized tests were used historically to delimit students who would have access to the regular education classrooms from those who would be relegated to segregated special education programs. The practice placed the onus on the student to qualify for inclusion in a "normal class" rather than on the teacher or school in general to accommodate his or her needs.

When used judiciously, however, the advantages that standardized tests offer to inclusive education are many and are not to be downplayed in favour of the more politic ideological stance of the day (Alberta Education, 1992b). Several authors have argued that, for example, for areas of curriculum (math and science) with an orderly progression of skills, achievement tests remain the best method of measuring an individual's skill level (Laycock, 1980a). Achievement tests are concerned with the characteristics of a student's present performance, with emphasis placed on the meaningfulness of the test's content when compared to the curriculum (Glaser, 1970). More generally, the use of such instruments allows for the labelling of services rather than students, permitting schools to respond to individual needs with precision, flexibility, and consistency from child to child (Glaser, 1970; McFadden, 1994; Stones, 1970). Such an approach allows schools to remain focused on those areas of a child's development on which they can make an impact (i.e.,

academic skills), rather than referring to clinical labels of "deficiencies" that have little *direct* relation to curriculum-based interventions.

Similar arguments have been made with respect to in-class assessments of student performance. Research on both inclusion and cognitive education hold that evaluation is most effective and meaningful to students when it is criterion-referenced (goal-directed) rather than norm-referenced (Alberta Education, 1992b; Ames, 1992; Laycock, 1980a). Student perceptions of the meaning of the assessment are important. Children normally focus on the quantity of their work; and, in doing so, their attention is pulled away from quality and the act of learning itself. When norm-referenced evaluations (focusing on a normative standard of performance among students within a given class) are used, students are effectively encouraged to compete against one another. This type of social comparison is considered by many researchers to be antithetical to intrinsic motivation and self-regulated behaviour. "Children's self-evaluations of their ability and self-directed affect are decidedly more negative when they are focused on winning, outperforming another, or surpassing some normative standard than when they are focused on trying hard, improving their performance, or just participating" (Ames, 1992, pp. 264-265).

Comparatively, criterion-referenced evaluations are held to be more conducive to the learning process. In this alternative, an instructor states at the outset what students are expected to *do* by the end of instruction by clearly articulating objectives for both teaching and testing (Ames, 1992). Stones (1970), for example, suggested that evaluation is better integrated into the teaching process as "continuous assessment" rather than being isolated at its closing stages. This format allows students to better understand the

connection between instruction in a given unit, learning objectives and the correlated assessment. Finally, Wilgosh and Mulcahy (1993) suggested that evaluation should examine the specific strategies or cognitive processes that students use to perform a given task. This mode of evaluation would be based upon direct instruction in the "learning-thinking skills" needed to expand students' mastery of cognitive processes.

The issue of standardized assessments and evaluation in First Nations schools has its own history of controversy. Against debates on appropriate standards and accountability, several authors have called for more culturally appropriate measures of achievement and of cognitive skills for Native students (Cardinal, 1977; de Waal, 1995; Wilgosh & Mulcahy, 1993). Researcher response to this issue extends from a decision on whether they thought that the academic success of Native students should be determined through the use of criteria defined by students' own cultural context or through the application of externally normed criteria.

Self-Regulated Learning

Research that examines the connection between metacognition and the affective component of learning suggests that students will become more effective learners once they are taught, or encouraged, to regulate their own learning (Borkowski, 1996; Borkowski et al., 1990). Referred to as a "global skill," self-regulated learning can be defined as that component of metacognition necessary for the generalized application of strategies. Stated in other words, metacognition refers to "changing cognitive skills and strategies [that occur] in response to new or changing task demands" (Borkowski, 1996; cf. Borkowski, 1992; Borkowski et al., n.d.; Corno, 1986; Day et al., 1992; Jones et al., 1987; Landine & Stewart, 1998; Wilgosh & Mulcahy, 1993).

Early in the development of metacognition, self-regulatory skills (also called *executive skills*) form the basis of adaptive, planful learning, thinking, reading, and problem solving across a number of academic domains. Self-regulatory skills initially involve the ability to analyze and "size up" tasks in order to select an approach to problem solving. Later in a child's academic career, self-regulation will involve the ability to monitor the course of learning and, if required, to adjust or revise the chosen strategy (Borkowski, 1992).

Outside the context of metacognitive research, self-regulation speaks more generally to the empowerment of the learner. Based on the assertion that the basic goal of teaching is to produce "responsible, self-sufficient citizens," several authors have argued that teaching should include an effort to teach skills of self-determination (Wehmeyer, Palmer, Agran, Mithaug, & Martin, 2000). Students are more likely to display active engagement in their pursuits once they feel empowered to do so (Ames, 1992). Such students will prove flexible, focused, and persistent in learning situations, even when faced by difficulty stemming from the task, environment, or their own learning difficulties. It is this empowerment that, theoretically, increases the potential for students to become lifelong learners. Finally, self-regulated learning is more often described as a process rather than a final state of functioning, a process that is continuously enhanced and updated through learning and performance experiences (Zimmerman, 1989).

This section reviews literature on self-regulated learning, beginning with research that has sought to define the construct and to describe its development. Subsequently, research is reviewed that highlights the manner in which a child's task-related and self-related concepts are affected by both his or her affective state and the social environment

of the classroom (Ames, 1992; Bruner, 1970; Burns, 1982; Day et al., 1992; Howard-Rose & Rose, 1994; Rich, 1980).

The literature on self-regulated learners has an extensive history that has resulted in a somewhat stable concept of what self-regulation entails, if not how to bring it about. Elements of the characteristic self-regulated learner can be seen in the "open classroom" movement in mid-20th century Britain and North American, where teachers sought to create a classroom environment that nurtured the "natural drive toward learning [that] children are able to learn mostly by themselves, from each other and from books" (Silberman, 1973, p. 42).

Research suggested that the foundation of self-regulated behaviour is increased student autonomy and accountability in learning, often based on a reformulation of traditional power relations in the learning context. Teachers seeking to promote self-regulation will provide all students (regardless of their strengths and weaknesses) with more personal responsibility for learning to fully draw their abilities and motivation into the process of learning (Howard-Rose & Rose, 1994). Teachers may allow students to be responsible for completing tasks independently, to monitor and pace some of their work, and to decide in what manner to complete tasks. Students may also be encouraged to account for their effort and the quality of their performance by being given the responsibility of more procedural tasks, such as record keeping (Bruner, 1970). For example, Borkowski et al. (1986) wrote that reading programs should seek to address some of the control problems common to poor readers by designing tasks that enable them to assume a more active role in learning. Teachers need to recognize that the reading skills characteristic of good readers to a large extent stem from a deliberate,

conscious effort to deploy the appropriate strategies, an effort that is couched in a greater sense of personal control when faced with learning tasks (Borkowski et al., 1986).

Wehmeyer et al. (2000) based their model of instruction upon principles of self-determination in a manner that allows teachers to instruct students to become causal agents in their academic and general lives. The model involves a shift in focus from teacher-directed instruction to a scenario in which students are in control. The process involves the paced instruction of problem-solving skills in three phases. During each phase, the teacher poses problems that students are then trained to solve by working through a sequential series of four questions that help them to create, modify, and meet self-made goals. Each phase includes several instructional supports provided by the teacher, but the student is the primary actor in terms of making choices, decisions, and actions. "Causal agents do not necessarily do everything for themselves, but instead are the catalysts in making things happen in their lives" (p. 445). Students are given the opportunity to improve skills of decision making, independent performance, self-evaluation, and flexibility. "Student-directed learning strategies place the responsibility for learning primarily with the student and involve the student in all aspects of his or her educational program" (p. 440).

Literature on Native education suggested that, in view of the interactional styles purportedly particular to Native children, teachers will be more effective with Native students when they share social control and make use of a more participatory structure in the classroom (Deyhle & Swisher, 1997). One study revealed that the level of participation of Native students was highest in those activities where they were allowed to work either in small student-led groups or individually, and lowest during teacher-

directed groups and lecturing (Philip, 1983; as cited in Deyhle & Swisher, 1997). Current research on Native education and that on cognitive education focus on the need to alter the authority relationship between teachers and students, referring as much to changes in teaching styles as to learning styles.

Research also indicated that self-regulated learning is also enhanced by a second factor; namely, the quality of the very design of learning tasks and activities. Tasks should be created in a manner that invites students to make judgments about their ability, that tests their willingness to apply strategies, and that elicits feelings of satisfaction.

Following from the discussion held earlier on criterion-referenced evaluation, learning tasks that foster self-regulated behaviour are also designed to appear meaningful and relevant to the student. Ames (1992) suggested that tasks that involve variety and diversity and that carry meaning and personal relevance are more likely to engage the student's interest in learning and, thus, to invoke a mastery orientation. Bruner (1970) suggested that students will be encouraged to become self-managing of their performance if teachers consistently reveal the more far-reaching relevance of their efforts and results.

Finally, Rich (1980) suggested that the choice of curriculum material is best made while considering the cognitive relevance of its content as it relates to a given student's knowledge-base and learning style. Although content beyond students' immediate environment and experience should be introduced throughout their school career

to require attention, performance, and participation, and to cognitively evaluate on irrelevant content denies the feelings and experiences of some students. . . . For many mainstreamed students the affective irrelevance is accentuated because of their environmental, physical and/or psychological handicap or disability. (p. 337)

Rich suggested that attention be paid to the effects of maintaining affective consistency across the curriculum, particularly with respect to material that may be insensitive to certain students and their life experiences.

As opposed to the environmental influences reviewed above, the next section examines research that speaks to affective components of learning that shape self-regulated behaviour.

The Affective Component of Learning

As suggested above, cognitive researchers have proposed that the ability to use cognitive and metacognitive skills in and of itself is inadequate in the development of the self-regulated learner, because mere knowledge of effective learning strategies is not enough to guarantee their actual application in a given situation (Bouffard, 1998). This aspect of cognitive literature reflects a move away from a strict focus on cognitive "structures" that exist in the mind of individual learners to a broader framework that takes into consideration many of other influences on learning. The following discussions review literature that illustrated how affect and motivation are considered mutually supportive in the context of self-regulated learning and achievement, particularly as discussed by Borkowski and his associates. Subsequently, literature on motivation is reviewed with an emphasis on those constructs that relate to the active engagement of the learner and academic performance (Ames, 1992; Borkowski, 1996; Borkowski et al., 1990; Borkowski et al., 1986; Bouffard, 1998; Carr et al., 1991; Day et al., 1992; Lupart, 1995; Nolen, 1988).

Borkowski and his colleagues have outlined the reciprocal relationship between personal and affective factors and the development of metacognitive skills necessary for

strategy selection, implementation, and monitoring. A student's affective state in the learning context will be informed by his or her attitude towards learning in general, personal engagement with learning tasks, adoption of learning goals, and ability to attribute success and failure to effort and the effective selection of strategies. For First Nation students, attitude toward school and teacher play an important role in the attribution of success and failure to effort. Affective components are also essential to bring about the effective generalization of strategy use (Borkowski et al., n.d.). The feedback that children receive in the learning context related to the success of their performance on a given task is "essential to shaping personal-motivational states [related to self-efficacy], which in turn can activate the control processes necessary for future strategy selection and monitoring decisions" (Borkowski, 1996, p. 399; cf. Borkowski, 1992). The feedback loop that exists to link metacognitive experience with subsequent metacognitive awareness is mediated by a student's affective state (i.e., sense of self-efficacy, interest, autonomy, and perceived control). "A sense of self-efficacy and an enjoyment of learning flow from individual strategic events but eventually return to energize strategy selection and monitoring decisions (i.e., executive processes)" (Borkowski & Muthukrishna; as cited in Borkowski, 1992, p. 254). At one point student affective states are also shaped by their experience in the learning context. Self-regulated learning is critical to the promotion of positive beliefs about the self and one's ability to succeed at achievement-related tasks; both of which are associated with high levels of cognitive engagement and an intrinsic motivation to learn (Ames, 1992; Borkowski et al., n.d.; Borkowski et al., 1990; Borkowski et al., 1986; Burns, 1982; Carr et al., 1991; Corno, 1986; Paris & Winograd, 1990).

Motivation and the Self-System

The study of motivation has sustained and been transformed through several revolutions in psychological and educational research. With the emergence of cognitive research in the 1970s, behavioural models of motivation and learning were replaced by models that focused on internal cognitive representations (Hickey, 1997). Although not always at the fore of cognitive research, motivation has recently enjoyed a renaissance in the context of several theoretical strains of cognitive education. In general, this renewed interest has been based on the realization that motivational factors play a fundamental role in cognitive processing, in a manner often independent of such traditional areas of study as achievement and domain knowledge. The expanded focus now includes an examination of "the relation between motivation and the cognitive, self-regulatory, and metacognitive strategic knowledge shown to be critical for classroom learning" (p. 177).

Educational researchers have long been interested in the concept of motivation. Wigfield, Eccles, and Rodriguez (1998) prefaced their review of motivational literature in education with the idea that, if motivation theory is concerned with the "whys" behind peoples' behaviour, then motivation theory in education is concerned with factors such as "the choices students make about which academic activities to do, their persistence in continuing the activities, and the degree of effort they expend" (p. 73). Research over the past 20 years has focused on the nature and development of student motivation, its relation to academic performance, and how it is influenced by various environmental factors.

A second reason that motivation has been of interest to educational research is that motivational processes and the "self-system" are believed to be intimately related to

the production of self-regulation (Borkowski et al., n.d.). Children enter school equipped with preconceived notions about their self-worth and their ability to succeed or fail (Borkowski et al., n.d.; Borkowski et al., 1990; Burns, 1982; McEwan, 1992). Students also arrive with differing conceptions of their "possible selves"—visions of the self in the future that are shaped by parental encouragement, aspirations, and visions of their own possible "better" selves. These conceptions contribute to motivation and self-regulation exhibited in the academic setting: Students will be motivated to perform and engage in self-regulated behaviours in light of basic concepts or desires they hold related to what they feel that they can accomplish in life (e.g., becoming a doctor or a librarian). However, most children's long-range visions are vague, and they most often lack detailed information about the strategies necessary to realizing them (Day et al., 1992).

In a three-year longitudinal study of the development of the self-system, Bouffard (1998) identified several components of the self that have historically been presented as distinct, if often unclear and overlapping, constructs in the literature, including: self-esteem, perceived competence (general and in specific domains), a personal sense of efficacy, and perceived control about success and failure. Among the elementary students in her sample, the author found that some degree of stability and internal consistency existed among the beliefs that they held about themselves as learners. The author also observed a moderate direct relationship between the self-system and students' successful use of cognitive and metacognitive strategies in reading. Those students who were classified as being in the "high" (i.e., generally positive and well-developed) self-system group obtained higher cognitive and metacognitive development reading scores than did those considered to belong to the "low" group. The author concluded that "the

development of a positive self-system provides the student with the motivation to display effort and actively engage in learning, leading to cognitive and metacognitive growth" (p. 70).

The application of motivation to education in research has resulted in a complex series of overlapping and interrelated constructs that are often difficult to keep straight. Although much of the early literature on motivation in the classroom focused on motivation as a characteristic of the individual, research has more recently given attention to social influences on motivation and learning (Wigfield et al., 1998). The following section examines several constructs emerging from motivational research that follow this trajectory and that have been related to active engagement and self-regulation in learning.

Goal Orientation

Goal orientation represents one construct emanating from the self-system that has been extensively studied in relation to both motivation and achievement (Ames, 1992). Researchers have identified general orientations that describe distinct styles of achievement-related performance and decision making. Ames, for example, discussed how a student's affective state informs his or her goal-directed behaviour in the learning context. She defined *achievement goals* as integrated patterns of beliefs, attributions, and emotional states that produce the intentions behind behaviour and that manifest in different styles of approaching, engaging in, and responding to achievement-oriented activities (Ames, 1992).

Ames (1992) identified two approaches in particular, each of which represents different conceptions of success, and reasons for engaging in achievement activities. These different orientations can be brought out by different environmental demands and

result in qualitatively different motivational patterns. A "performance orientation" (or "ego-involvement"; Borkowski et al., 1990) involves a focus on one's ability and sense of self-worth. Learning is approached under the auspices of doing better than others by surpassing normative-based standards or by achieving success with little effort (Ames, 1992; Nolen, 1988).

A "mastery orientation" or "task-involvement", (Borkowski et al., 1990) is one in which the student engages in task out of a basic desire to learn and where there is a belief that effort and outcome are closely tied. Although children readily create conceptions of their own abilities through comparison with other students, those with a mastery orientation (in which, for example, they compare their own current and past performance) foster a motivational pattern that is likely to promote long-term and high-quality involvement in learning (Burns, 1982). The goal-directed behaviour associated with a mastery orientation can be encouraged by a wide range of variables related to motivation that are conducive to positive achievement and that are necessary mediators of self-regulated learning. Mastery goals increase students' preference for challenging work, the amount of time students spend on learning tasks, their persistence in the face of difficulty, and, ultimately, the quality of their engagement with the task at hand, through the use of effective learning and problem-solving strategies (Ames, 1992). With respect to metacognitive instruction, Nolen (1988) suggested that, if students do not possess a mastery orientation, then even more specific instruction and in-depth knowledge of deep-processing strategies may not lead to their increased use (p. 272). Strategy use for students with a mastery orientation will depend upon an attributional belief that effort leads to success and that failure can be remedied by a change in strategy use or choice.

Stipek and Gralinski (1996) examined children's beliefs about intelligence and effort in learning and found a complex relationship between such beliefs and their goal orientations and use of strategies. The authors adapted definitions used by Dweck (1986) and associates, who differentiated between individuals who are prone to view intelligence as a capacity or fixed entity (referred to as an entity theory), affected only modestly by effort, and those who see it as a set of knowledge and skills that increase with practice and effort (an incremental theory; cf. Henderson, 1976). They referred to research that suggested that students possessing entity theories are likely to have a performance orientation towards learning, whereas those with an incremental theory are more likely to present a mastery orientation (p. 398). Further, their hypothesis held that an entity/performance orientation implies that students would more likely use cognitive strategies in a superficial mode of engagement than would those presenting an incremental/mastery orientation.

Stipek and Gralinski (1996) found that the two orientations related to intelligence were not mutually exclusive. The view that intelligence is fixed did not "preclude children from believing that effort still has positive effects on intelligence and performance" (p. 404). Following Cain and Dweck (1989), Stipek and Gralinski argued that "all individuals include both a stable capacity and an acquirable knowledge component in their definition of ability, but entity theorists [focus] their attention more on, or weigh more highly, the capacity than the knowledge component" (p. 404). The researchers found that motivation orientations among their sample of Grade 3, 5, and 6 students remained relatively consistent with previous findings. However, they argued that, whereas a fixed view of intelligence and performance may have negative effects on

learning and achievement (particularly due to students' maladaptive reactions when they encounter difficulty), a performance orientation, although inferior to a mastery orientation, may be better than no academic goals at all. However, performance orientations will have a particularly negative impact on children low in self-confidence (Stipek & Gralinski, 1996).

In a similar study, O'Sullivan and Joy (1994) examined the development of children's metacognitive understanding of the influence of ability and effort on reading problems. Student participants from Grades 1, 3, 5, and 7 were presented with vignettes of four fictitious children with reading problems, for whom impediments to learning varied in terms of intellectual ability and the level of effort. Participants were asked to determine the cause of each character's reading problem and to suggest possible strategies to remediate the problem.

O'Sullivan and Joy (1994) found that at each grade level students attributed characters' problems to a lack of effort and cognition (i.e., paying attention) and, to a lesser extent, motivation. However, students rarely attributed the reading problems depicted in the vignettes to a lack of ability, even when the character in question was described as "not smart." Student suggestions for remediation largely involved increasing effort, more than altering the strategies used in reading tasks. Overall, student metacognitive understanding about what causes reading problems was fairly sophisticated and included such disparate factors as effort, ability, cognitive, and motivational factors. However, their metacognitive knowledge related to remediating reading problems was much less evolved. O'Sullivan and Joy interpreted these findings to indicate that reading competency is believed by children to be heavily shaped by

effort; and, as such, it is very much within the realm of control of the individual. They suggested that, "because teachers rarely make explicit the processes involved in reading, emphasizing instead the influence of time and practice, they may be contributing to children's somewhat naïve beliefs about the role of effort in correcting reading problems" (p. 127).

Data from a study by Landine and Stewart (1998) illustrated a positive relationship between metacognitive training offered to Grade 12 students, motivation, and self-efficacy. Although all students responded to the training intervention, they did so with varying degrees of motivation. The authors argued that students will choose a learning strategy that corresponds to the type of motivation with which they are inclined to approach the task in question. They identified several degrees of motivation, which include a "surface approach," in which students are motivated to complete a given task in order to meet a "superficial" end, such as the minimum institutional requirements; a "deep approach," which is similar to the mastery orientation; and, finally, an "achieving motive," which corresponds to a performance-related orientation to task completion (Landine & Stewart, 1998).

In a study of coping strategies associated with the two achievement orientations, Butler and Neuman (1985) suggested that students with an achievement orientation will be more likely to ask for help to achieve mastery over a given task than will students with a performance orientation. Students in Grades 2 and 6 of varying academic abilities were divided randomly into a "task-focus" group and "ego-focus" group. Each group was given a series of puzzles to manipulate, following instructions that were designed to invoke a mastery orientation and performance orientation, respectively. For each age and

level of difficulty, there were several puzzles that the majority of students were able to solve independently, whereas several others were included that could be solved only after receiving a hint. Only students who requested assistance were given the hint. Following completion of the exercise, students were interviewed to determine their reasons for either asking for help or neglecting to do so. As predicted, students at both age levels were more likely to request help when the task was presented as an opportunity to develop competence than in a context in which the task was presented as a measure of ability, even though in both cases they were instructed to request help as they needed it. Students in the task-focus group who avoided asking for help explained this avoidance in terms of a wish to strive for mastery independently, and those in the ego-focus group who also avoided asking for help stated that they did so in order to avoid being perceived as being inadequate (Butler & Neuman, 1985).

Finally, Ames (1992) described how a child's mastery orientation influences his or her more global perceptions of the self (i.e., general self-concept). The belief in his or her ability to perform classroom tasks (both current and potential) will nurture a sense of belonging in that setting, which in turn will affect his or her performance, affective growth, and social development.

Control Beliefs

A second construct that is often associated with motivation and the self-system emerged from attributional theory and is represented by the concept of locus-of-control (Crandall, Katkovsky, & Crandall, 1965; Wigfield et al., 1998). This construct speaks to students' sense of control over the success and failure that they experience in the learning context and distinguishes between an internal and an external locus of control

(Borkowski et al., 1986; Bouffard, 1998; Landine & Stewart, 1998). Such beliefs can either encourage or inhibit productive behaviour in the learning context (Sinkavich, 1990, p. 174). *Internal control* refers to the belief that the individual can control the outcome of a given task; *external control* refers to the belief that the outcome is determined by external factors beyond the control of the individual.

Research has confirmed a positive correlation between an internal locus of control and academic achievement (Wigfield et al., 1998). The concept has also been incorporated into broader theoretical frameworks in which control beliefs have been related to other factors in the self-system, including the need for competence, autonomy, and relatedness. Students who possess an internal locus of control, for example, will be more likely to feel competent in both a global and school-specific sense. "When the family, peer, and school contexts support children's autonomy, develop their competence, and provide positive relations with others, children's motivation will be positive, and they will become fully engaged in difference activities such as school work" (p. 76).

Research suggested that children develop an internal control belief as early as kindergarten, although the accuracy of beliefs at this early stage may be low. However, as children's understanding of causality and explanations for outcomes matures, their understanding of which kinds of events they are able and unable to control becomes more advanced. Similar to the cyclical relationship of metacognitive experience and self-regulation, the experience of success itself is important for the development of positive, internal control beliefs (Wigfield et al., 1998).

Sinkavich (1990) suggested that the relationship between control beliefs and metacognitive knowledge is also reciprocal. Negative (or external) control beliefs will

inhibit the acquisition of metacognitive knowledge, and the failure to acquire such knowledge may reinforce dysfunctional behaviour. On the other hand, a positive (or internal) control belief will assist in the acquisition of metacognitive knowledge. The author hypothesized that attributional beliefs, motivation, and particular metacognitive skills (e.g., information-processing ability, self-testing ability, metamemory skills) would be related in the examination performance of graduate students and suggested that the first two factors would be the best predictors of actual performance. The results indicate that the use of metacognitive skills, motivation, and control beliefs comprised the best subset of predictors for students' performance on the examination (Sinkavich, 1990).

Interest

A third strand of research on the self-system has focused on the role of interest in motivation (Hickey, 1997; Wigfield et al., 1998). Although the role of interest in classroom learning was promoted in the earliest models of pedagogy in the 20th century, Hickey illustrates that early conceptions centred on content-oriented motivational variables (i.e., students' personal interests in contrast to the content they were expected to learn). This focus was eventually supplanted by a focus on domain-general concepts, such as curiosity and drive. A focus on interest was also present in the distinction drawn in motivation literature between intrinsic and extrinsic motivation: Individuals who are intrinsically motivated engage in activities for their own sake and out of interest, whereas individuals acting under extrinsic motivation engage in activities for other reasons, often related to instrumental purposes (Wigfield et al., 1998).

More recently, research on interest has reverted to content-specific notions specific to classroom learning, either associated with personal interest or situation interest

(the subjective attitude regarding the degree of attractiveness inherent in a particular learning situation). Individual interest is a characteristic of the individual and includes both knowledge and value about a given topic or object. Situational interest stems from particular conditions in the environment. Individual interest may be significant for future engagement in learning tasks (Wigfield et al., 1998). Similar to Bandura's (1986, 1997) approach to motivation, Hickey (1997) argued that the literature on interest has refocused attention on the individual as the prime agent in successful learning.

Volition

Volition represents a final construct stemming from the self-system, although the construct is less often the subject of research and remains relatively ill-defined.

Nonetheless, the concept is significant because it offers a way to flesh out one elusive facet of self-regulated learning; namely, the notion of "active engagement."

Corno and Kanfer (1993) drew a distinction between motivation and volition, arguing that where motivation guides decisions about engaging in particular tasks, volition guides the behaviours that are used to attain that goal: "the processes that underlie student initiative and persistence when there are obstacles to goal-directed learning" (p. 301). However, the authors considered the two constructs to be overlapping and reciprocal and to constitute part of the broader self-regulatory system. Motivation, they argued, as a choice process may be a necessary but insufficient condition for enhancing learning and performance. Volitional factors affect the transition of decisions or intentions into action, which in turn affects both performance and subsequent motivation.

The concept allows one to take consideration of self-regulation and metacognition beyond decision making and cognitive processes to the actions that students take.

Volition involves strategies that serve to monitor a student's concentration and emotional state and which, in conjunction with appropriate cognitive strategies, contribute to effective learning. These processes protect the individual's intention to learn from distractions and competing claims for attention (Corno, 1986). "Appropriately applied volitional control helps people *do* what they way they will do by regulating cognitive, motivation, and affective processes around challenging goals" (Corno & Kanfer, 1993, p. 303).

However, Corno and Kanfer (1993) remarked that self-regulation does not represent the totality of volition. They suggested that one area where volition goes beyond self-regulation is with respect to its use of strategies that "engage the mind," as opposed to those that "set the environment" (p. 307). Both strategic modes assist individuals in altering the environment to reduce distractions and to take advantage of those aspects of the environment that are conducive to goal attainment. However, the former includes those covert strategies that set the stage for learning, including, for example, the ability to avoid negative thoughts about test performance and the careful organization and review of study material. Although both involve a "reordering" of the environment to enhance learning, volition takes a step further by offering a set of strategies that involve "regulating the critical psychological functions of motivation and emotion" (p. 307).

Little research has been done to date to establish the constructs and processes that constitute volition. Corno and Kanfer (1993) identified three broad clusters of constructs

and processes. *Action control processes* constitute knowledge and strategies that can be used to manage cognitive and noncognitive resources (e.g., attention, self-motivation, handling counter-productive emotions) for goal attainment. *Goal-related cognitions* form the basis of flexible strategy use during goal implementation and can include several strategies associated with self-regulation (i.e., self-monitoring, self-evaluation, and self-reaction). Finally, *volitional style* refers to dispositional tendencies that affect goal implementation and involve relatively stable individual differences that are somewhat derived from personality factors. Similarly, Kuhl (1985; as cited in Corno & Kanfer, 1993) proposed six volitional strategies that constituted ways that individuals might facilitate the enactment of a decision or intention, including metacognitive control, motivation control, emotion control, control over the task situation, and control of others in the task setting. Both conceptualizations illustrate the extension of meta-level controls to aspects of the self-system that, until recently, have been downplayed by cognitive theory: the affective components of motivation and emotion.

Volitional research can be seen to represent the culmination of the movement in cognitive research towards presenting the self as imbued with agency. Corno and Kanfer (1993) suggested that, although the place of volitional strategies remains marginal in mainstream classrooms at best, the values of self-determination, self-management, responsibility, and endurance that underlie the construct constitute qualities that have long been considered benchmarks of success in the American educational system. Given the possible significance of the construct, they concluded that further research to clarify the conceptual framework and constituent processes and constructs of volition is needed.

The Social Component of Learning

Among the more salient aspects of cognitive development, a social component of learning has also been identified that is closely associated with self-regulation and affect (Das, 1995; Hickey, 1997; Luria & Yudovich, 1970; Vygotsky, 1970). This perspective emerged largely with the work of Vygotsky, Soviet development theory, and, from the 1960s, cognitive theory in the West. Vygotsky and his followers described the process of cognitive development as occurring in the context of a lifelong series of individual actions and social interaction. "Development results from socialization within the reciprocal interaction between the individual and others who are actively participating in the individual's development" (Hickey, 1997, p. 177). Learning is the internalization of jointly held knowledge which saturates and is transmitted through social interaction; it cannot be separated from the (social) context in which it takes place. Referring to what he called "zones of proximal development," Vygotsky argued that not only does a child's individual cognitive ability develop through his or her interactions with experienced users of a particular language, but so also does he or she receive indirect instruction in the cultural underpinnings of the language in question (Belmont, 1989; Bos & Van Reusen, 1991; Das, 1995). Just as cognitive development cannot be considered without accounting for motivation, internal cognitive activity cannot be separated from the social means through which it occurs and is nurtured (Hickey, 1997).

One of the most influential theoretical domains in the study of motivation and classroom practice is represented by the social cognitive model developed in the work of Bandura (1986) and his associates in social psychology. This model "led motivational theorists to supplant behaviourist constructs such as drive with cognitive constructs such

as beliefs and goals" (Hickey, 1997, p. 177). Bandura conceptualized individuals as agents in their development whose beliefs about themselves (efficacy, ability) mediate achievement-oriented behaviour and cognition. Individuals' effort to complete a particular activity is a function of their expectancy for success if they apply themselves, and their value for succeeding at that activity.

Bandura (1986, 1997) described the self-system as something that enables individuals to exercise control over their thoughts, feelings, motivations, and actions. The self-system includes a series of reference mechanisms (and subfunctions related to the perception, regulation, and evaluation of behaviour) that inform the interplay between itself and an array of influences in the environment. The manner in which individuals interpret the results of their actions and performance attainments shapes the manner in which they subsequently modify their environment and self-efficacy beliefs; these modifications, in turn, inform subsequent actions and performances. Bandura referred to this feedback loop as *reciprocal determinism*, "the view that (a) personal factors in the form of cognition, affect, and biological events, (b) behaviour, and (c) environmental influences create interactions that result in a *triadic reciprocity*" (Pajares, 1996, p. 544).

In this conception, people are both producers and the product of their own environment and social system. Bandura (1997) defined *self-efficacy beliefs* as those "in one's capability to organize and execute the courses of action required to manage prospective situations" (p. 2). These beliefs differ from more global constructs of personal competence in that they refer to task- and situation-specific contexts and goals.

Bandura (as cited in Woolfolk & Hoy, 1990) differentiated between two sets of expectations that are considered determinants of motivation. *Outcome* expectations he

defined as judgments about the likely consequences of specific behaviours in a specific situation, whereas *efficacy* expectations were defined as those beliefs that one is capable of achieving a certain level of performance in that situation (Woolfolk & Hoy, 1990).

Bandura understood the two sets to be interrelated, noting that "the types of outcomes people anticipate depend largely on their judgments of how well they will perform in given situations" (p. 82).

These beliefs influence motivation and self-regulation in several ways (Pajares, 1996). Zimmerman (1989) wrote that it can be assumed that self-efficacy is a key variable affecting self-regulated learning. Strategy application by students provide them with valuable knowledge about self-efficacy, which in turn is thought to determine subsequent strategy selections and performance. Students' self-efficacy perceptions have been found to be related to their use of learning strategies and self-monitoring (e.g., use of self-observation, self-judgement, self-reaction). Those with high self-efficacy have displayed better quality learning strategies and more ability to monitor their learning outcomes than have those with low self-efficacy (Zimmerman, 1989).

Self-efficacy beliefs influence the choices that individuals make and the courses of actions they pursue in that people will for the most part engage in tasks in which they feel competent and confident of their chances for success and will avoid those situations in which they do not. Such beliefs inform the amount of stress and anxiety that individuals experience as they engage in given tasks. Such beliefs will also inform the degree of effort that people will commit to a given activity, how long they will persevere when confronted with difficulty, and how resilient they will prove in those situations. In

other words, the higher the sense of self-efficacy one possesses, the greater one's degree of effort, persistence, and resilience (Pajares, 1997).

People with a strong sense of personal competence in a domain approach difficult tasks in that domain as challenges to be mastered rather than as dangers to be avoided, have greater intrinsic interest in activities, set challenging goals and maintain a strong commitment to them, heighten their efforts in the face of failure, . . . and attribute failure to insufficient effort or deficient knowledge and skills which they believe they are capable of achieving. (p. 8)

In this manner, Bandura (1986, 1997) presented self-efficacy beliefs to be the key element in human agency.

Social cognitive theory holds that, due to the influence of the ability to self-reflect, the knowledge, skills, and past accomplishments of individuals are not always the predictors of future attainments because the significance of people's beliefs concerning their capabilities has not yet been taken into account. Pajares (1997) suggested that, in considering individual students, for example, "the beliefs that [they] develop about their academic capabilities help determine what they do with the knowledge and skills they have learned" (p. 4). The way that the individual will perform can often be better predicted through an examination of those beliefs. Self-efficacy beliefs are shaped by—or rather, shaped through the interpretation of—four sources of influence, each of decreasing significance: mastery experiences, or the individual's most decisive and successful performances; vicarious experiences of the results produced by the actions of others (e.g., the effects of peer-modeling and the interpretation through comparison with one's self); verbal persuasions, involving exposure to verbal judgment by others; and physiological states (e.g., anxiety, stress, arousal, fatigue, and various mood states) (Pajares, 1997).

Pajares (1996, 1997) reviewed current research that examined the role that self-efficacy beliefs play in human motivation. The author suggested that contemporary research has failed to clarify the nature of the relationship between self-efficacy beliefs and other expectancy constructs either by producing clear and distinct definitions or by determining clear variances in their respective contributions to the prediction of academic performance or self-regulatory behaviours (Pajares, 1996, 1997). Building on a critique of efficacy research proffered by Bandura (1997), Pajares argued that research to date has typically approached the measurement of self-beliefs in a manner that reflects global or generalized self-beliefs that have little resemblance to the task with which they are compared. Bandura has suggested that researchers measure such beliefs with the understanding that "particularized judgments of capability may vary across realms of activity, different levels of task demands within a given activity domain, and under different situational circumstances" (p. 6). This warning has often gone unheeded in motivational research, Pajares suggested, as researchers often attempt to discover simply the nature of interplay among motivation variables without any reference to particular criterial tasks or performance attainments. He criticized the validity and usefulness of such studies, stating that the relative level, strength, and generality of these beliefs should have a significant impact on determining how they are measured. "General self-efficacy instruments provide global scores that decontextualize the self-efficacy/behaviour correspondence and transform self-efficacy into a generalized personality trait rather than the context-specific judgment Bandura suggests it is" (Pajares, 1997, p. 14).

Pajares and Miller (1995), for example, illustrated how the predictive value of self-efficacy measures depends on the criterial tasks used in assessment. The authors

compared student judgments of their capability to solve math problems with two outcome measures: their ability to solve the problems on which self-efficacy was assessed, and math-relatedness of academic majors. Student confidence to solve math problems was a more powerful predictor of their ability to solve those specific problems than was their "confidence" to perform math-related tasks in general or their confidence of earning high grades in math-related classes (Pajares & Miller, 1995). Findings bolstered the point made by both Bandura and Pajares: "When efficacy beliefs are globally assessed and/or do not correspond with the criterial tasks with which they are compared, their predictive value is diminished or can even be nullified; when efficacy assessments are tailored to the criterial task, prediction is enhanced" (Pajares, 1997, p. 28).

As discussed earlier, one criticism extended by Pajares (1997) is the similarity between expectancy constructs and their conceptualizations. He illustrated that several constructs are not only defined in nearly identical fashion, but are also measured in similar ways. The author suggested that self-efficacy has often been used either in similar fashion or interchangeably with the concept of self-concept (or self-esteem). Social cognitive theorists have conceptualized both as mechanisms of personal agency in that both function to mediate the influence of other determinants on subsequent behaviour. The latter differs from self-efficacy, he argued, primarily in that it is measured at a more general level and includes the evaluation of feelings of competence and self-worth associated with the behaviours in question. Self-efficacy, on the other hand, is merely a context-specific assessment of competence to perform specific tasks. The focus of arguments concerning the relative value of each construct (i.e., which self-belief provides

the greater explanation and prediction of behaviour) lies in the assertion that different situations call forth different belief systems (Pajares, 1997).

Pajares (1996) argued that self-efficacy research has had an influence on the study of motivation and self-regulation in several ways. He found that "particularized measures of self-efficacy correspond to the criterial tasks of which they are compared, surpassing global measures in the explanation and prediction of related outcomes" (p. 543).

Researchers have found that self-efficacy beliefs are correlated with other self-beliefs, motivation constructs, and academic choices and achievement; but the nature of such relationships revealed in this literature depends on the manner in which self-efficacy and criterial tasks are operationalized and assessed (Pajares, 1996).

Pintrich and De Groot (1990), for example, found a correlation between global academic self-efficacy and both cognitive and metacognitive strategy use and self-regulatory behaviour, and academic performance. They concluded that self-efficacy plays a mediational role with respect to cognitive engagement and suggested that improving students' self-efficacy might lead to the increased use of cognitive strategies. In this way, student performance would be enhanced. "Students need to have both the 'will' and the 'skill' to be successful in classrooms" (p. 38).

Classroom interventions within the social cognitive model, rather than attempting to remove challenges to accommodate a low-achieving child's maladaptive tendencies in efficacy and attributional beliefs, deliberately include challenges to promote more adaptive tendencies (Hickey, 1997). Most recently, studies have focused on the impact of learning environments on motivation by focusing on those aspects of the typical

classroom to serve to lessen efficacy beliefs and motivation in students (e.g., Pajares, 1996).

Teacher Efficacy

One final strain of self-efficacy research has focused on the impact of teachers' sense of self-efficacy on student learning. Teacher efficacy was first identified in a study by the Rand Corporation, in 1977, which identified it as the most powerful variable in studies of instructional effectiveness (Guskey & Passaro, 1994; Tschannen-Moran, Hoy, & Hoy 1998). Measures of teacher efficacy were initially derived from scales used to access locus of control (e.g., Crandall et al., 1965; Rotter, 1966), but by the 1980s they were developed to reflect the contemporary multidimensional model of teacher efficacy that had emerged from social cognitive theory. Building on Bandura's model of self-efficacy, Gibson and Dembo (1984) extended the concepts of expectancy outcome and efficacy outcome to refer to teacher dispositions and developed a questionnaire to measure the two dimensions. The first (general) teaching efficacy refers to the individuals' general expectations of the consequences of teaching. Woolfolk and Hoy (1990) have argued that this factor is in fact closer in nature to expectation outcome; and, thus, Gibson and Dembo's model of teacher efficacy cannot be said to be in complete congruence with Bandura's self-efficacy model (cf. Tschannen-Moran et al., 1998). The second factor is closer to the construct provided by Bandura's model: Personal teaching efficacy denotes a teacher's judgments of his or her personal ability to execute particular courses of action to bring about student learning.

Woolfolk and Hoy (1990) remarked that a number of issues remain unresolved in relation to both the construct and its measurement. The authors examined the sense of

efficacy among prospective teachers for the purpose of determining whether the notion is conceptualized in similar ways by prospective and experienced teachers. In so doing, the authors hoped to clarify the concept of efficacy itself. Consistent with earlier research, the authors found two independent factors of efficacy among prospective teachers: general and personal teaching efficacy.

Woolfolk and Hoy (1990) were also able to expand on the relationship between efficacy and other important variables, including teachers' pupil-control ideology and attitude towards student motivation and bureaucratic control. The first variable speaks to teachers' beliefs about power relations in the class. Prospective teachers with a high sense of teaching efficacy are more "humanistic" in their approach to pupil control, are willing to create mastery experiences for students, and are more open to disseminating control for learning to students. Those with a low sense of efficacy tended to hold a custodial view of their role with respect to their students by emphasizing rigid control of classroom behaviour. These teachers tended to rely on extrinsic inducements and negative sanctions to persuade students to apply themselves.

Following these correlations, teacher efficacy has been known to predict student efficacy beliefs and student achievement across various domains of achievement.

Guskey and Passaro (1994) argued that, due to the wording of items on Gibson and Dembo's (1984) scale, it is often difficult to discern whether data reflect personal and general teaching efficacy dimensions or a structure based on internal and external locus of control. In reference to their study, Guskey and Passaro argued that they could find no evidence to indicate the distinction between the two dimensions identified by Gibson and Dembo. Rather, their results indicated the difference to be an internal versus external

distinction, similar to the locus-of-control distinctions in attribution theory (p. 637). Rather than distinguishing between their personal ability to affect student learning and the ability of teachers in general to do so, teacher respondents tended to draw a distinction between a belief in the influence that they and all teachers have on student learning and those aspects where they do not. The internal factor appeared to represent teachers' perceptions of personal influence, power, and impact in teaching and learning contexts, whereas the external factor appeared to be related to perceptions of the influence, power, and impact of factors external to the classroom and beyond their direct control (e.g., adverse bureaucratic influence; social, demographic, or economic conditions particular to a given setting). Similar to the two dimensions traditionally associated with the Teacher Efficacy Scale, these two factors appeared to operate independently of one another (p. 639). The authors added their support to Woolfolk and Hoy's (1990) assertion that teaching and personal efficacy are the direct extension of Bandura's (1986, 1997) notion of outcome and efficacy expectations, rather than direct correlations to social cognitive's categories of self-efficacy belief. Further, they added their voice to Pajares' (1996, 1997) suggestion that future measures of efficacy take into account a clearly specified conceptualization of "self-efficacy" as either global or goal specific.

The Impact of Teacher Expectations and Behaviour

Research has also indicated that, beyond the beliefs that teachers hold of their personal effectiveness as teachers, the expectations that they have for student performance and success greatly influence student learning (Ysseldyke, 2001).

Ysseldyke (2001) identified three ways in which teacher expectations regarding the ability and capacity of students with special needs can be detrimental. Reflecting on the research that he and his associates have conducted on assessment, the author first remarked that teacher behaviour is often shaped by the stereotypes that they hold of people with disabilities. These stereotypes may be triggered by naturally occurring student characteristics such as gender or socioeconomic status or by the extent to which student behaviour bothers them personally. Further, teacher expectations may be driven by a deficit portrayal of students with disabilities in which teachers put more stock in the label that a student is given (rather than assessment and actual performance) when making judgments about how much he or she will be capable of achieving. In this context, assessment is more often used to identify causal deficits or disorders underlying poor academic performance, which are then used to justify *subsequent* poor performance without examining the quality of instruction that that student receives. "We spend far too much time making predictions about students' lives, and far too little time making a difference in their lives" (p. 302).

Finally, Ysseldyke (2001) stated that the expectations that teachers have for students with disabilities are often far too low. Teachers often believe that students with disabilities are "neither competent nor capable of achieving high standards. They believe that the students cannot and will not profit from their educational experiences" (p. 301). The author clearly stated that, at this point, researchers have yet to understand decisively how much a student can achieve, regardless of learning difficulties, when given intensive and appropriate instruction. He concluded that the range of assessment for students disadvantaged by the mainstream school setting—those deemed "at risk" for school

failure, learning "disabled," or marginalized on social grounds—must extend beyond the student to consider the ability of the school to meet their needs. "Opportunity to learn and delivery systems are ignored, and outcomes are stressed. Unless they are given adequate opportunities to learn, higher standards will victimize students already harmed by gross inequities in the educational system" (p. 304).

In a 1992 commentary, Borkowski acknowledged that the decision to introduce cognitive and metacognitive principles to instruction must be accompanied by teacher upgrading and a substantial reexamination by teachers of their personal approach to instruction. Once teachers have committed to providing a strategy-based approach to instruction, he suggested that their style of teaching the core subjects (literacy, writing, and math skills) will need to be modified by use of a "working model" of children's cognitive and metacognitive development. Teachers who have an understanding of the connection between metacognition and learning are "in good positions to reshape self-defeating beliefs, enhance feelings of self-efficacy, foster an interest in learning for its own sake, and most important, associate such changes in the motivational self-systems with the emergence of independent, self-regulatory skills" (p. 255).

Conclusions: Implications for Low-Achieving Students

This section examines the application of research findings discussed above in the context of programming for students with low levels of achievement due to learning difficulties.

Many researchers have suggested that low-achieving students will exhibit a need for explicit instruction in the use of cognitive and metacognitive strategies (Belmont, 1989; Borkowski et al., 1986; Borkowski et al., 1989; Bos & Van Reusen, 1991; Jones

et al., 1987; Swanson & De La Paz, 1998; Wilgosh & Mulcahy, 1993). Research indicated that student self-regulation of cognitive and metacognitive strategies is the essential factor in facilitating learning and transfer, regardless of learner difficulties (Howard-Rose & Rose, 1994; Lupart, 1995). The performance of low-achieving children has been shown to improve even after minimal instruction in the use of strategies (Borkowski et al., 1986; Jones et al., 1987; Paris & Winograd, 1990).

However, the literature also indicated that children with learning difficulties may fail to transfer newly acquired skills even after intensive training (Borkowski et al., 1986; Lupart, 1995). Borkowski et al. suggested that the difficulty that some students have in using goal-directed strategies in a spontaneous manner may be related to a fault in one of three component areas of metacognitive strategy: specific strategy knowledge, referring to the child's ability to grasp the attributes of a given strategy (e.g., its goals and objectives, its range of applicability, etc.); general strategy knowledge, the child's understanding of the effort required to apply various strategies and the effort it takes to do so successfully; and metamemory acquisition procedures, the information that assists children in learning more about, and eventually regulating, low-level or underdeveloped strategies (Borkowski et al., 1989; Borkowski et al., 1986; cf. Pressley et al., 1985).

Borkowski et al. (1989) suggested that, although metacognitive theory is well suited to understanding the challenges experienced by students with general learning disabilities, it is less applicable to cases of specific disabilities. Whereas students in the latter category (who may be of average intelligence overall with deficits in localized areas of a subject area) may compensate for their disability by developing higher order skills, students with a general learning disability will be less likely to have metacognitive

skills in their learning repertoire. This can be seen in a lack of metamemory acquisition procedures or executive processes, such as an inability to select and effectively implement strategies and/or to monitor their own comprehension. Such students find it difficult to generalize the strategies that they are taught even with extensive individualized instruction. "A more productive approach to cognitive intervention may be to train, in an explicit fashion, beliefs about strategy effectiveness and the executive processes necessary for strategy implementation" (p. 61).

Strategy and Metacognitive Training

Ashman and Conway (1997) suggested that, despite vast amounts of research that apply cognitive theory to education in the abstract, relatively little of the literature has offered comprehensive suggestions on what "cognitive instruction" actually looks like. Pressley et al. (1985) reviewed three approaches to "modifying" general and specific strategy knowledge for the purpose of influencing strategy use. The first approach represents a laissez-faire position that holds that strategy use will develop naturally through students' metacognitive experiences. The second approach involves direct instruction by teachers in declarative knowledge about specific strategies. The third goes one step further by instructing students in procedures that will themselves generate strategy knowledge. These procedures are characterized as *metamemory acquisition procedures* (MAPs; procedures that create or modify specific strategy knowledge), in which learners are taught how to create and internalize metamemory experiences in the context of day-to-day cognitive experiences. MAPs can include self-testing to determine whether a new strategy is helpful or not or a comparison between a current and previous trial to evaluate one strategy against another. The information generated in this manner

shapes general and specific strategy knowledge which, in turn, inform the way that students make future strategy decisions (Pressley et al., 1985, p. 30).

French and Rhoder (1992) expanded on two basic models that can be used to directly enable and encourage thinking in the classroom, the emphasis being on encouraging students to become consciously aware of what they are doing and of how they are doing it. The authors suggested a combination of direct and indirect instruction, using modelling and scaffolding, to introduce specific skills and strategies that emphasize the "why, when, where and how to use it" (p. 1). Indirect learning (also called inquiry learning) requires that students learn to identify procedures, rules, and criteria without direction from the teacher. Students are allowed to select a topic for study, answer self-generated questions on the topic, then share their answers and conclusion. The teacher in this model acts as mediator between context and content: as model, allowing students to become part of the process as the thinker thinks out loud; coach, encouraging and allowing to become increasingly active and independent; questioner; and discussion leader. This mode of instruction is best applied to areas of the curriculum where material can be carefully selected and organized into a logical sequence of cognitive skills to be taught (French & Rhoder, 1992).

In another article, Swanson and De La Paz (1998) wrote that students with poor skills in reading comprehension will most likely be unable to acquire strategic reading behaviours by themselves. These students fail to attend to the meaning of a passage and to monitor their comprehension by rereading a question or passage and may often employ strategies that are inappropriate for the task at hand. On the other hand, teachers have been found to spend very little time teaching specific skills to help students improve their

comprehension skills. The authors offered summaries of several approaches that teachers can take to integrate metacognitive instruction into their regular writing program. These approaches generally involve two steps, in which students are shown various frameworks, models, or strategies for understanding and interpreting text; and then self-regulatory procedures are introduced to allow them to become aware of and execute specific cognitive strategies to help them understand what they read (Swanson & De La Paz, 1998).

A Holistic Approach to Learning

Training in executive processes and specific strategies may prove insufficient for effecting the generalization of newly acquired skills among children with learning disabilities. Instruction should be designed that enhances positive motivational processes, such as a sense of control over their learning, significant goals and values related to each new task, and positive attributions of both successes and failures (Lupart, 1995; Oka & Paris, 1987). Oka and Paris wrote that students, especially those with learning difficulties, must learn that failure can be constructive by providing information about strategy use in the future. A failure orientation in low-achieving students (often associated with the state of learned helplessness, in which students are less likely to take ownership over their successes and more likely to dwell on their failures at learning tasks) must be corrected in the process of attempting to bring about generalized problem-solving skills. In describing the cyclical relationship between executive processes and attributional beliefs, Borkowski et al. (1989) wrote, "Attributional beliefs are the *consequences* of repeated strategy use . . . but the *causes* of problem-seeking, strategy selection, and monitoring behaviors" (p. 66).

To be effective learners, students must also be able to see the strategies and meta-strategies being taught to them as meaningful. In the use of scaffolding of strategy instruction, for example, students gradually internalize the processes being modeled and discussed by the teacher and, in so doing, come to realize that "learning" and full comprehension involve a combination of their own personal effort and the use of the strategies with which they are being presented (Borkowski, 1992). In a review, Wigfield et al. (1998) cited literature that argued that the internalization of the values of learning leads to student engagement. Classroom and instructional approaches have a large impact on student engagement through, for example, support structures that either foster student dependency or autonomy and ownership over the learning process.

Research on motivation and achievement-related behaviour has demonstrated the importance of students' perceptions and beliefs about their ability as learners and about the control that they have over their academic success and failure (Ames, 1992; Corno, 1986; Howard-Rose & Rose, 1994). Students who develop into self-regulated and intrinsically motivated learners are those who will be personally invested in the process of learning and, further, empowered to succeed (Spekman, Goldberg, & Herman, 1993).

The mode of instruction suggested by this body of research is holistic in its conception of learning, which is understood as a complex system of intellectual, affective, and social factors (Jenkins, 1971). Nonetheless, few studies on metacognition or motivation appeared to apply major conclusions to populations outside the mainstream. Pajares (2000) recently drew attention to the inability of practitioners to draw reliable conclusions from motivational and self-efficacy research when dealing with minorities due to the lack of research specifically targeting these groups. He remarked

that research efforts have illustrated that "culturally bounded understandings of individuals are the understandings required to make sense of human conduct" (p. 2). He cited research indicating particular conclusions about self-efficacy among non-Anglo groups that clearly contradict the findings reviewed above. For example, Pajares cited research that indicates that special-education students in segregated programs often overestimate their ability levels more strongly than do students in nearly any other ability group. In these studies, these judgments proved not to be accurate predictors of academic capabilities (p. 4).

Pajares (2000) referred to a basic principle of social cognitive theory by pointing out that standard principles of self-efficacy research may not hold up in the face of social constraints, inadequate resources that impede academic performance, or cultural values that instil in students a very different approach to self-conception and evaluation. Finally, the author alluded to a "culturally attentive" approach to educational psychology that he described as sensitive to dynamics of success or failure, while avoiding the deficit mode of research described by Deyhle and Swisher (1997). This mode of research not only acknowledges, but also centrally focuses on, the complex relations between the cultural background, social class, and economic factors embedded in social structures (Pajares, 2000).

Cognition and action are always situated in a network of cultural particulars. . . . Theorists such as Vygotsky. . . remind us that however elegant the insight or telling the behaviour, neither can be understood fully beyond the natural boundaries provided by the local, situated, cultural conditions in which they are embedded. (p. 5)

A substantial body of research on inclusion and school reform suggests that teaching is most effective when it is designed to foster the cognitive engagement of students and

when it enforces the self-regulated characteristics and behaviours (Ames, 1992; Howard-Rose & Rose, 1994).

Learning Characteristics of First Nation Students

An education that truly reflects quality and equality must include indigenous educational methods to promote the well-being of the individual, the family, the community, and the cultural unit. There is increasing evidence that when many First Nation students begin school they may have learning strengths that differ somewhat from those of many non-First Nation students. Some of these differences are related to differences in the cultural and experiential backgrounds. All children learn using a range of different mental processes or "ways of learning". These "ways of learning" develop as the child grows from infancy to early childhood and beyond. Parents, siblings, caregivers and peers, play an important role in the development of these ways of learning. If learning strengths are learned from those who are important to the child and from life experiences, then learning strengths are clearly influenced by culture.

Participants in the research study presented the following learning behaviours in varying degrees. Students demonstrated both a preference and a strength for (a) global ways of learning, (b) the use of imagery to enhance comprehension, (c) the use of examples to initially understand the overall concept and then abstracting to learn the applicable rule; and, (d) a trial and feedback response routine, with the teacher acting as model.

These are merely general indications for teachers, not defining attributions or characteristics of First Nations students. In suggesting the above, teachers may become

sensitized to making astute accommodations to meet the requirements of specific learning behaviours of individual students. (refer to Appendix B)

There are obviously wide variations amongst individuals, and it is imperative to avoid using First Nation learning strengths as a new way of stereotyping.

In most First Nation cultures, cooperation, egalitarianism, and informality are more important than individual achievement, self-expression, or competition. This is why cooperative learning is so important in First Nation education. Slavin's (1988) reviews of a number of research studies showed that cooperative learning improves the academic achievement of all students, but its effects have been much more dramatic for minority students than for non-minority students. Slavin has been a prominent promoter of what he called *TGT*, or team games tournaments. Students are placed on learning teams, organized like athletic teams. This is one of many techniques, but if overdone with First Nation students, it could have negative effects.

In the following section, research related to acceleration is reviewed to reveal its potential to meet these goals.

Acceleration as an Alternative for Low-Achieving Students

Although acceleration initially developed as a mode of instruction primarily for use with students identified as gifted and talented, its application has recently been extended to students identified as "at risk." The definition of acceleration to be used in this section of the review is that promoted by the Stanford group of researchers associated with the Accelerated Learning Schools project (Finnan et al., 1996; Hopfenberg et al., 1993; Keller & Soler, 1996; Levin, 1996; Meister, 1991). Acceleration, for this group, refers to two interrelated processes: first, to a process of school reform based on the

principles of inclusion and, second, to a mode of individualized instruction that incorporates many of the principles of cognitive education reviewed earlier. This final section of the review examines the Stanford approach to acceleration in both senses. The principles outlined are then illustrated through two case studies based on a composite of initiatives under the Accelerated Schools Project and a localized accelerated literacy program, respectively. Finally, research related to the efficacy of the accelerated learning model is examined.

Defining Acceleration

The Stanford group proposed a comprehensive model for schools wishing to restructure through an intensive process of introspection, inquiry, and bottom-up reform. The Accelerated Schools Project was launched at Stanford University in 1986 by Dr. Henry Levin, as a 30-year experiment designed to respond to the needs of at-risk students (Chasin & Levin, 1995, p. 130). An economist by training and an experienced activist, Levin (1996) began to explore ways to bring about democratic schools that would capitalize on the strengths of all students, rather than searching for and "remediating" their weaknesses. The project includes an active research and development initiative to explore restructuring and to offer guidance through the assistance of more than 200 coaches. The Accelerated Schools Project was piloted in the fall of 1986 at two San Francisco inner-city schools known for a student body characterized by a high rate of poverty, diverse racial mix, and low levels of achievement, a profile common to schools participating in the project. Since this modest beginning, the project has expanded substantially in terms of the number of schools, coaches, and regional centres involved and in terms of the depth and sophistication of the transformation process (Levin, 1996).

The model involves several stages which will normally extend over a period of several years. The first phase involves goal setting, which involves extensive research and planning for restructuring at the district and school level. This is followed by an implementation phase that involves school restructuring to reflect accelerated organization, curriculum, and modes of instruction in every classroom; teacher retraining; and the creation of collaborative networks with the community and district levels.

Assessment in this model is a fundamental and integral part of the school process from beginning to end. Formative evaluation occurs during the planning stage and, subsequently, on a yearly basis; whereas a summative evaluation is conducted every three to five years. The direction of reform is modified in light of the results of this evaluation as the school community sees fit.

Meister (1991) examined the use of assessment in two accelerated schools in the United States in the context of a discussion of the accountability model proposed by Levin (1988) and the Stanford group. The two schools in question were in the process of restructuring under the Accelerated Schools Project framework. Although each took a very different approach to acceleration, both schools used assessment as one stage in an overall system of accountability to the student's right to learn (Meister, 1991). The author illustrated that, despite the fact that the schools were still in the process of transforming, accelerative programming was making a significant impact on disadvantaged students by addressing achievement in basic and higher order skills, grade-level proficiency, and the overall academic success of their students (Meister, 1991). The author stressed that schoolwide reform was all the more necessary (i.e., as opposed to targeting specific students in a pull-out setting) given the high number of economically disadvantaged

students in each of the school populations in question. Finally, these case studies illustrated the importance of staff involvement and support throughout the process. New ideas or directions that staff wanted to take in the assessment and instruction of students were often virtually impossible, given their inexperience with special needs and a lack of time to spend on research and reflection.

As a mode of instruction, the Stanford group's approach to acceleration seeks "to bring educationally disadvantaged students into the mainstream by the time they leave . . . school" (Meister, 1991, p. 1). Although acceleration has most commonly been associated with programming for gifted students, many of the performance-related issues faced by this group are similar to those faced by other students with special needs; namely, the principles of cognition, motivation, and self-regulated learning discussed earlier (Hallahan & Kauffman, 1994; Kulik & Kulik, 1992; McFadden 1994). It is for these reasons that acceleration has been considered to take on new significance for all students, including those with special needs (Finnan et al., 1996).

The rationale behind acceleration begins with the idea that learning is a sequential and developmental process that will manifest as a completely different experience for members of any given age group. Effective learning occurs when an appropriate "match" is established between the curriculum with which a child is presented and his or her level of ability, knowledge, and experience. "Effective teaching involves assessing the student's status in the learning process and posing problems slightly exceeding the level already mastered" (Benbow, 1991, p. 157).

For those who would benefit from learning experiences beyond those provided at their stage in the lock-step grading system, "acceleration" allows students to move at

their own pace through a subject or field of study (Eby & Smutny, 1990; Schiever & Maker, 1991; Vergason, 1990). In stark contrast to tracking schemes in which the ability level of a given student is presumed to remain static throughout her or his educational career, the key to a successful intervention is flexibility and the ability of the program to adapt to individual capacity and needs. "If the school curriculum is viewed as a sequential series of studies and learning experiences, acceleration represents an attempt to place the student at a point on the continuum which will best ensure further growth at optimal speed" (McLeod & Cropley, 1989, p. 195).

Some authors have taken the very label *acceleration* to task, responding to the occasional confusion that the term inspires and to its popular connotation with systematic pressure on students to perform. Feldhusen et al. (1996) argued that the term is a misnomer that draws attention away from the true source of "acceleration" (i.e., the pacing that is directed by the child him- or herself) and misleadingly places it on the program. Rather, accelerated learning programs are designed to bring students "to a level of instruction commensurate with their achievement levels and readiness so that they are properly challenged" (p. 49).

The Stanford approach to acceleration is similar to "mastery learning" (also known as *continuous progress*, *self-pacing*, or *adaptive acceleration*), a process in which students are allowed to move at their own pace through a particular body of knowledge (Eby & Smutny, 1990; McLeod & Cropley, 1989). This strategy is most appropriately used with subjects that are inherently sequential in nature, such as language arts, math, and certain sciences (Corraza, Gustin, & Edelkind, 1995; Eby & Smutny, 1990; Zepeda

& Langenbach, 1995). Although ideally employed in the context of individualized instruction, it can be used in both individual and group settings (Corazza et al., 1995).

The process centres on a cycle of diagnostic testing and prescriptive teaching (Benbow, 1991; Corazza et al., 1995; Lewis et al., 1992). The student's current level of knowledge and skill is determined using standardized and/or diagnostic tests, and the areas of strengths and weaknesses that arise are analyzed. A customized program of instruction is devised that targets both the student's performance-related strengths and weaknesses, but in a manner that gives the student increased opportunity to overcome his or her particular area of weakness. The student will be required to show mastery of the target skill before being allowed to proceed. However, once mastery is demonstrated through a second form of the test, the process is repeated at a higher level (Benbow, 1991; Feldhusen et al., 1996).

The relationship between positive motivation and the maintenance of a challenging level of task difficulty becomes apparent in this context. For students to be motivated to perform at their best, accelerated learning programs have to be flexible enough to respond to individual needs (Van Tassel-Baska, 1992). Although writing from the perspective of gifted education, Van Tassel-Baska wrote that all children benefit from flexible models of grouping and instruction. Illustrating a convergence between the notion of seeking an "optimal match" and cognitive learning theory in general, she wrote that "each learner is entitled to experience learning at a level of challenge, defined as task difficulty level slightly above skill mastery" (p. 70). Simply put, all students will benefit from being taught at a level that suits their needs and ability (Eby & Smutny, 1990, p. 169).

A further goal of this approach is to foster the development of a more positive self-concept while at the same time developing the individual's self-regulated skills. This model focuses on what strengths low-achieving students bring to the learning domain and seeks to encourage the holistic growth of the individual by stimulating self-esteem, autonomy, and social skills. Ultimately, the student is encouraged to develop into a responsible, creative, and independent learner.

Case Studies

The Accelerated Schools movement has been growing at a dramatic rate in North America and has been at the root of many successful examples of reform. The following section presents two case studies that illustrate some of the principles outlined above. The first is a composite of several stories of accelerated schools that illustrates the approach to restructuring taken by Levin, his associates with the Accelerated Schools Project, and the staff of several participating schools. The second case presents an example of acceleration as a mode of programming and instruction. The Accelerated Literacy Learning (ALL) Program is an early intervention for students at risk for failure in early literacy that is based on giving equal support to student academic performance and the development of a positive self-concept in the learning context.

Case Study: The Accelerated Schools Movement

Accelerated schools use a comprehensive process to transform their entire school, rather than focusing on a particular grade, curriculum, or approach to instruction. The Accelerated Schools Project guides schools in pursuit of "powerful learning," a process through which schools work to determine what is best for their children by examining all elements of the school culture (from curriculum to instruction and so on), and then to work

towards systematic change (Finnan, 1994). The group encourages schools to break away from traditional approaches to children caught in an at-risk situation to one where they are simply treated as children with the same characteristics and potentials of *all* children (Hopfenberg et al., 1993, p. 16). The process of reform evolves around three principles.

Unity of purpose. Members of the school community (staff, parents, students, district office representatives, and local community members) agree to a vision for the school towards which they can all work. By including all of the players involved in the planning, design, and implementation of educational programs, the school ensures a more cohesive effort and a greater commitment to its success.

Empowerment coupled with responsibility. With the tendency for decisions at schools for at-risk students to be made by agencies external to the school community, Chasin and Levin (1995) argued that it is understandable that administrators, teachers, parents, and students tend to blame factors "beyond their control" for the poor educational outcomes achieved by at-risk students. An Accelerated Schools project encourages members of the school community to take responsibility for the major decisions that will shape educational outcomes, with the belief that all people involved in the lives of children daily are in the best position to make decisions for them.

Building on strengths. Instruction involves comprehensive enrichment rather than remediation, which Levin (1996) considered a response to low achievement that slows the pace of instruction to the point that students can only get farther and farther behind. Rather than reserving acceleration as a mode of instruction for children labelled "gifted and talented," accelerated schools take the approach that all children are gifted and talented and should be treated as such (Hopfenberg et al., 1993, p. 18). These schools

view children as coming in with a wealth of strengths and talents that can be built upon, especially in the effort to remediate those areas needing more work. In this context, areas of strength could include "not only the various areas of intelligence identified by Gardner and his associates, but also areas of interest, curiosity, motivation, and knowledge that grow out of the culture, experiences, and personalities of all children" (Chasin & Levin, 1995, p. 134).

Teachers are encouraged to identify these strengths and to hold high expectations for student achievement. For the point of view of students at risk, having a work threshold set at a challenging level (and one created in part by an area of personal strength that is being held up for them to see, possibly for the first time) can be a very empowering experience. "Schools rarely find constructive ways to embrace the experiences of children, relegating many of them to failure" (Chasin & Levin, 1995, p. 130).

Finnan (1994) examined the transformation of a middle school that had adopted the approach of the Accelerated Schools Movement. She explained that the primary goal of the Accelerated Schools Project is to affect change in a school's culture, essentially by introducing a process involving basic social science research techniques that will be conducted by members of the school community themselves. Through a process of taking stock, the development of a common vision, and continuous inquiry, the school community in question evolved to the point where a group decision was made and adopted to hold high expectations for all students. Students responded to the reforms by commencing to hold higher expectations for themselves, and many became actively involved in the project itself. The effort also resulted in more ground-up decision making, open communication,

increased family involvement, and collaboration in terms of programming. Finally, the school also measured success through the sense of group efficacy that emerged: "As staff began to realize that they could make changes in their teaching, some of them became increasingly creative" (p. 123). Finnan asserted that the process was successful because it was integrated into the accepted practices at the school (i.e., into school culture).

Hague and Walker (1997) looked at the concept of powerful learning more in depth by examining the transformation of two urban accelerated schools. Embedded in social constructivist theory, the authors defined *powerful learning* as "learning that is active, engaging, and arouses the curiosity of the learner, . . . and where teachers 'look not for what students can repeat, but for what they can generate, demonstrate, and exhibit'" (Brooks & Brooks, 1993; as cited in Hague & Walker, 1997, p. 470). Referring to the reluctance with which teachers often approach changes to their more traditional teaching environments and philosophies, the Accelerated Schools Project embeds a substantial part of school transformation in extensive orientation and "buy-in" periods and yearlong training for staff. The personal internalization by teachers of the principles that underlie schoolwide reform (termed the *big-wheel process*) sets the groundwork for the more long-term *little wheel* changes—changes taking place in individual classrooms to bring about powerful learning environments (Keller & Soler, 1996). Teaching to students' strengths and utilizing talent means broadening the types of teaching strategies used in the classroom to those that address the many ways (other than lecture and seat-work formats) that individuals learn: orally, kinesthetically, artistically, and so on (Hopfenberg et al., 1993). Hague and Walker introduced a powerful learning "checklist" to provide a method for teachers to monitor their progress towards the

incorporation of powerful learning activities in their classrooms. By comparing checklists completed by teachers in August and in January, I was able to determine where teachers perceived that their personal areas of strength and of challenge would lie in realizing the transformation.

Results of this analysis showed that there were two main obstacles to the adoption of these practices into the classroom. First, teachers indicated their view of students with learning difficulties to be entrenched in a deficit framework, in which students are viewed as "lacking" in some area through some sort of delay or experiential/cultural deprivation, a gap that can be best treated through remediation. Teachers were not used to a high degree of student involvement, particularly from low-achieving students.

Second, teachers suggested that the degree of leadership, initiative, and innovation expected of them (in the context of research cadres, for example) was sometimes overwhelming and unlike anything that had been expected of them before. These comments indicate the degree to which participation in restructuring under this approach was antithetical to what many see as the "traditional" role of teachers: a role lived out at the receiving end of top-down decision making, disempowered excepting within the domain of one's own classroom (Hague & Walker, 1997; cf. Keller & Soler, 1996). In a similar study by Keller and Soler, a teacher participant commented that "the Accelerated Schools Project helped 'validate' many ideas he had about what constitutes 'good' teaching, but in the past had felt too intimidated to try" (p. 279). A second participant commented that her teaching style had become much more flexible, including a variety of ways for students to exhibit their knowledge and new-found autonomy. Teachers indicated that the specific problem-solving and inquiry process that

characterized the process of reform had also spilled over into the classroom to characterize a new mode of learning centred on student-led discussion and inquiry through higher order cognitive skills (Keller & Soler, 1996). Such commentary again exemplifies King's (1987) notion of role shock. This correlation suggests that the role expected of teachers in the new setting will need to be articulated clearly to them. It also underscores the need for step-by-step support for teachers making the transition to the new role expected of them in the accelerated school setting.

Finally, some teachers responded that they wished to adopt more progressive measures into their classroom, but simply did not know where or how to begin, despite the extensive training session (Hague & Walker, 1997). Exemplified by the approach of accelerated school communities, this concern in school restructuring can be best met through prolonged professional development that sees information, resources, support, advice, and feedback available to teachers in the process of making these changes year-round.

Case Study: The Accelerated Literacy Learning (ALL) Program

The Accelerated Literacy Learning (ALL) Program is an early intervention pull-out program that targets students in Grade 1 who have been identified as being at risk of failing to learn to read. The objectives of the program are to

accelerate the reading progress of A.L.L. students to a level of average or above; to support and improve students' self concepts by providing successful reading and writing experiences; . . . to lower the number of potential high school drop outs by providing successful reading and writing experiences in the first grade. (Short, Frye, King, & Homan, 1999, p. 389)

Students are assessed at the beginning of the school year through a series of eight reading and writing tests at the emergent literacy stage to determine their eligibility.

Students attend ALL lessons for one 30-minute period a day to receive one-on-one training as "reading apprentices" from a teacher trained in instructional scaffolding techniques. Each ALL lesson involves rereading opportunities to allow the development of reading fluency and regular experiences of success, as well as discussion, independent reading time, and the introduction of a new book. Teachers monitor student progress, use of strategies, and instructional needs. Second, students participate in shared writing activities during which they develop word-analysis strategies and "increase their awareness and knowledge of print, as writing is viewed as 'reading in slow motion'" (Short et al., 1999, p. 390).

Lessons are built on "high expectations for the development of independent, strategic readers" (Short et al., 1999, p. 390). Citing research on the relation between student achievement and teacher expectations, the authors suggested that teacher expectations are critical to student academic and social/emotional development, particularly for those in the early years of school. Students who receive praise and positive feedback in association with a good effort are more likely to enhance their target behaviour, whereas students who receive little feedback are more likely to pick up on the low expectations their teachers hold for them. Students in this group will be less likely to believe in the value of effort for attaining success in class, and therefore will show less persistence, little effort to use appropriate strategies, and ultimately lower success (Short et al., 1999).

Short et al. (1999) based their research on the observation that success in the ALL program was, in several cases, often not sufficient to ensure success in the regular classroom or in terms of learning to read in general. Their study examined the quality and

extent of communication and collaboration between the program and homeroom teachers, on which the management of ALL was based. Researchers found that the extent to which students would experience success depended on the supportive behaviour of homeroom teachers and the degree to which teacher expectations for students' performance was consistent across the domains.

In the case of one particularly successful student, the authors noted a high degree of collaboration between her teachers in the regular and ALL classrooms, a circumstance that resulted in a more consistent perception of her strengths, needs, and abilities across the domains. Her teacher was aware of the program's rationale and goals for the student. She was able to provide guidance and to utilize several reading strategies and scaffolding techniques that were similar to those used in ALL. She allowed students to use their ALL books in class and was observed to offer verbal support and praise at every opportune moment. She also supported students' needs in class through the use of flexible reading groups. Further, this student's teacher met regularly with the ALL teacher to plan and discuss the student's progress.

In contrast, some teachers remained unsure of the program's goals and process, and their expectations for students' improved performance in areas of language arts remained low. Short et al. (1999) cited a second case in which a student was afforded little support or opportunity to transfer the skills and growing self-esteem he was garnering through ALL to the regular classroom. This student's teacher was particularly nonsupportive of the program, making little effort to learn about its goals, the work her students completed there, or their progress. Regular attempts by the ALL teachers to set up a collaborative relationship with this teacher failed. Further, the teacher offered little

opportunity in her own class for the student in question to use strategies or activities that had proven beneficial to him in ALL. The teacher retained control over the learning process during language arts, affording little time for independent or student-directed reading. Finally, despite attempts by the ALL teacher to instill an understanding of the importance of providing positive reinforcement to the students, the teacher in question declined to do so. The authors suggested that this lack of communication resulted in different sets of expectations for the student in question that became a factor that inhibited his progress.

At the time of publication, the program was in its sixth year and running in nine school districts in Florida, as well as in two counties in Kansas. Although the program has proven beneficial for the majority of students involved, Short et al. (1999) agreed that acceleration may not prove successful with all children. However, they argued that teacher support and positive encouragement for the successful acceleration of students is a key component of an early intervention program of this type. The support that the first student received from her teacher helped to enhance her self-esteem and promote her belief in her own abilities, but the lack of such an experience for the second student, the authors argued, impeded his ability to achieve the same degree of success with acceleration and one-on-one instruction. "After all, it is largely teachers' perception of students' acquired competence that the long-term benefits of an accelerated program are realized" (p. 388).

Finally, this article illustrates that many of the problems cited may have originated in the way that the program was implemented. At the time of writing, the authors were involved in a reformulation of the training that the ALL and homeroom

teachers received related to the program. Districts involved with the program are required to have at least three team-building sessions a year, meetings that are focused on developing program awareness, instructional training, goal setting, creating appropriate classroom environments for at-risk students, and review. Discussion and feedback from participants throughout the year are critical to working relations between homeroom programs and the intervention, and the authors suggested that teachers who participate in the sessions are frequently more willing to take ownership of the program in their school (Short et al., 1999; cf. Hague & Walker, 1997).

Efficacy

As an area of inquiry in special education, acceleration has garnered an enormous amount of academic attention (Van Tassel-Baska, 1992). Research produced during the past two decades has consistently confirmed the efficacy of acceleration as a curricular model, using descriptions of the generally positive effects of accelerative interventions on academic performance and achievement (Feldhusen, 1991; Jones & Southern, 1991; Kulik & Kulik, 1984; McLeod & Cropley, 1989; Merlin, 1997; Ravaglia, Suppes, Stillinger, & Alper, 1995; Rimm & Lovance, 1992; Rogers & Kimpston, 1992; Schiever & Maker, 1991; Southern & Jones, 1991, 1992; Sowell, 1993; Swiatek & Benbow, 1991; Van Tassel-Baska, 1992; Vaughn et al., 1991). Studies that compared academic achievement of accelerated children find that they achieve equal to or better than nonaccelerated peers of similar levels of ability when indicators such as levels of motivation, achievement, long-term academic accomplishment, and early completion of professional training are considered (Durden & Tangherlini, 1993; Kulik & Kulik, 1984;

Rimm & Lovance, 1992; Schiever & Maker, 1991; Swiatek & Benbow, 1991; Van Tassel-Baska, 1992). However, this is by far the only point of consensus in the literature.

Acceleration has been described as an effective mode of intervention, particularly when it is combined with a variety of grouping arrangements. Several authors have argued that ability grouping alone does not guarantee improvements to a child's performance; grouping must be accompanied by effective adjustments to the curriculum in order to be effective (Colangelo & Davis, 1991; Kulik & Kulik, 1992; Zigmond & Baker, 1990). In a meta-analytic study of research on the impact of different grouping arrangements on learning, Kulik and Kulik concluded that positive effects were most often a function of the specific changes to the curriculum (acceleration and enrichment programs yielding the most positive results), and not merely the result of different configurations of students (p. 76). Zigmond and Baker surveyed several cases of mainstreaming in which students with special needs failed to make any significant progress in key subjects in inclusive classrooms, simply because the teachers in question made no effort to differentiate their teaching styles to accommodate individual needs in class. The authors concluded that mainstreaming in general will fail if teachers continue their "business as usual" approach in classes with diverse needs and abilities (Baker & Zigmond, 1990; Zigmond & Baker, 1990).

Later in the decade, Zigmond and Baker (1995) came to similar conclusions in a special edition of *The Journal of Special Education*, having completed a survey of six case studies of integrated classrooms across the United States. If the argument in favour of inclusion holds that "the most important feature is *place*, because place carries with it 'access'" (p. 247), they found that the opportunities that were promised to be made

available in the inclusive class setting did not always materialize. They concluded that the "emphasis on access to the mainstream curriculum may be in conflict with a commitment to access to the most effective and appropriate educational experiences" (p. 247).

Although researchers have largely agreed on the academic benefits of acceleration, there has been far less consensus on the social impact on students. Some research has illustrated various opportunities for positive affective experience in accelerated contexts, leading to opportunities for personal and social growth (McLeod & Cropley, 1989; Rimm & Lovance, 1992; Schiever, 1991; Sowell, 1993). Researchers reported that children in groups of similar ability enjoy the understanding and empathy they receive from one another (as well as from the adult mentors and specialized teachers they find in this setting) and will often benefit from cooperative learning experiences in these contexts (Sowell, 1993). Others have noted that students in accelerated learning programs exhibit the heightened self-confidence and independence that lead to improved motivation and subsequent achievement (Van Tassel-Baska; as cited in Schiever & Maker, 1991). Still other researchers commented on the impact of consistent, positive reinforcement and recognition on students' self-concept and performance stemming from the feeling of being "special" that results from positive achievements (Rimm & Lovance, 1992; Southern & Jones, 1991).

However, other researchers suggested that the social and emotional impact of accelerated learning experiences on students are more often negative (Feldhusen & Moon, 1992; Southern & Jones, 1991, 1992). A common criticism is that students who are placed in accelerated learning programs may run the risk of emotional maladjustment due to a lack or loss of friends, increased pressure to perform well, and reduced outlets

for expression or self-discovery outside of school (Feldhusen & Moon, 1992; Southern & Jones 1991). Southern and Jones (1992) suggested that removal of a student from his or her peer group may prove a hindrance to the student's social development, because the profound focus on his or her academic activities will leave little time for age-appropriate activities around the home or community, and those extracurricular activities at school are often as much a marker of child development (Southern & Jones 1992).

Still other authors have argued that the academic, social, and psychological implications of each form of acceleration are different, and decisions must be made on an individual case basis (Kulik & Kulik, 1992; Rogers & Kimpston, 1992). And, in fact, many of the criticisms levelled against acceleration appear to refer more accurately to grouping practices rather than the process of acceleration itself.

Furthermore, the impact of the failure to provide a curricular program that offers appropriate levels of task difficulty, appropriate cognitive instruction, and a flexible forum for exceptional students has been well documented. In contrast to arguments that suggest potential social and emotional damage, Rimm and Lovance (1992) posited that there are indeed more risks associated with allowing a child to remain unchallenged, bored, and/or frustrated in his or her learning environment. In keeping with the correlation between affect and motivation in the learning context discussed earlier, they argued that acceleration can be used to counter a lack of motivation in underachieving students by providing them with more appropriate learning opportunities. De Bono (1982), for example, described a disposition he labelled the "Everest Effect," in which the motivation level of gifted students increases once they are exposed to increasingly challenging and complex problems.

Conclusion

The literature examined early in this review revealed that the ideals of the self-determination movement related to healing, autonomy, and growth are often cast aside by communities lost in the commotion of creating local systems of education that are able to meet the challenges faced by their children. Bands that assume local control must still contend with the legacy of detrimental historical education policy in Canada, the most pervasive reminder of which is the deficit ideology discussed by Deyhle and Swisher (1997). They must attempt to do so while countering the "doom statistics" associated with Native education, including low rates of achievement and high rates of dropouts, figures that did not simply go away with the assumption of local control. Further, band-run schools must ultimately participate in the community response to the factors related to social crisis and violence that increase the likelihood of academic failure for many students.

However, perspectives on community education and social reform, such as that promoted by Calliou (1993), suggested that, far from being superficial and irrelevant in the effort to meet these challenges, the ideals of autonomy and support for growth that characterized the self-determination movement may provide badly needed direction. Remnants of this movement provide us with a reminder of *why* we strive for self-determination in education, or as Pugach (2001) has written, "In fact, it is often the stories that stay with us as the kernel of our commitments to action" (p. 439). With this inspiration, for example, the mode of reform discussed by Calliou exemplified the connection between the empowerment of the individual and of the collectivity by suggesting that the latter can best be effected in the context of the empowerment of the First Nation as a whole.

Rather than effecting empowerment in education through local control *before* attempting to affect empowerment for the individual through education, research clearly revealed that the two processes will best succeed when they occur concurrently. Schoolwide reform that refocuses the staff's collective effort into meeting the needs of students will be most successful when implemented alongside similar efforts to empower all stakeholders in the community setting. Perhaps the first step to reforming band-controlled schools is to encourage them to reexamine their own culture (past and present) in order to find local resources available to meet current challenges.

This mode of community development also closely resembles the direction of the reform movement in special education. Just as early history in Native education saw primary responsibility for the creation of direction and goals left to an external source (most of the state), the history of special education was often embedded in the removal of control over the learning process from the individual. Inclusion has forced Canadian dominant and First Nations society to reexamine its relationship with and responsibility to the individual. With the provision of a full continuum of services, society through the school can be understood to have renewed its commitment to support the growth of all of its members. Nonetheless, stakeholders must hold the state accountable for making those services the best that they can be through the application of comprehensive, consistent, appropriate, and fair funding formulas.

The inclusion movement has revealed the fact that a child's educational experience cannot be broken into components with any expectancy of success to public awareness. Learning encompasses all aspects of the self, and therefore all aspects of personal development must be engaged in the learning process for the goal of bringing

about self-regulated learning to occur. Learning difficulties, in this context, must also be understood as part of the *same* holistic, dynamic framework that comprises both strengths and weaknesses. Difficulties such as low achievement must then be considered a challenge to the caretakers responsible for the development of the individual, not as a label which the individual must bear.

There have been only a few systematic analyses of instructional approaches for students with learning disabilities in the literature of the last 30 years. This lack of clear direction creates confusion about how best to educate these students and, more important, First Nation students in community schools. However, a synthesis of the research findings thus far does indicate that the most effective methodology of teaching children with learning disabilities should combine components of direct instruction (teacher-directed lesson, discussion, and learning from books) with components of strategy instruction (teaching ways to learn, such as memorization skills and study skills). For the ALP the main instructional components include:

- sequencing (i.e., breaking down the task and providing step-by-step prompts if and when necessary);
- drill-repetition-practice (i.e., daily skill testing, repeated practice opportunities and sequenced reviews);
- directed questioning and responses (i.e., teacher models; e.g., asking process or content questions of students);
- control of task difficulty (paraphrasing chapters in textbooks so that students can comprehend content effectively);
- use of technology (computers, OHP, and presentation media);

- teacher modeled problem solving;
- small-group instruction with teacher and teacher aides; and
- strategy cues (reminders to use specific strategies etc.).

Keeler and Swanson's (2001) meta-analysis of 272 studies of students with learning disabilities and the efficacy of the instructional approaches used indicated that those mostly likely to have positive effects on student achievement were the following: (a) control of task difficulty, (b) using small instructional groups of five or fewer students, (c) the use of structured questioning and directed responses involving interactive questions and answers, and (d) teacher-directed and -centered responses to students, encouraging them to ask questions, summarize, and strategize.

In ALP, teachers and teacher aides were encouraged to use differentiated instruction. The focus was on task difficulty, small interactive groups, and structured questioning and directed responses. Teachers tried to match instructional techniques to the subject areas in which they were most effective; for example, reading comprehension was taught with a combination of direct instruction and strategy instruction. Bottom-up instruction was used for word recognition but not for reading comprehension. Both phonics and whole word methods were used to teach reading.

Current "best practices" with respect to the enterprise of teaching, as exemplified by acceleration, reflect this perspective. Instruction in the research under review applied a cognitive approach to the effort of enhancing the development of a self-regulating, autonomous individual capable of generalizing the skills and background knowledge he or she has acquired to new, imaginative, and far-reaching contexts. Mithaug (1998) described the goal as "building students' capacity to act in various social circumstances

as self-directed, self-determined persons capable of managing their own adjustments in different school and community environments" (pp. 19-20).

To this end, a variety of elements rarely brought *as a whole* into the traditional mode of teaching have been invoked, including strategic and metacognitive instruction, motivation, and interrelated affective and social elements of the self-system. Research related to instruction for low-achieving students reflects the way in which this network of intervention supports the growth of the individual in all personal domains. "Separating 'affect' from 'intellect' makes the thought processes appear as an autonomous flow of 'thoughts thinking themselves,' segregated from the fullness of life, from the personal needs and interests, the inclinations and impulses of the thinker" (Vygotsky; as cited in Hickey, 1997, p. 178).

To conclude, this section reviews several new directions of research suggested by the literature reviewed herein. To begin, there is a dire need for data that define the specific nature and extent of special needs among First Nations. Although this will be difficult given the complexity of the situation and the reluctance with which bands have historically faced such a project, this type of information is a critical first step in the attempt to provide a comprehensive, nationwide, and appropriate manner for meeting special needs among First Nations. Furthermore, an application of Vygotsky's approach to the social component of learning (i.e., with respect to cultural transmission through language, and personal growth through zones of proximal development) to an examination of the creation of "localized" modes of school reform among First Nations could be interesting and useful.

Several authors pointed out that there have been few comprehensive studies on the long-term effects of participation in accelerated learning programs (Feldhusen, 1991; Van Tassel-Baska, 1992). Although research has been conducted that examines how gifted students who were accelerated fare in latter life, due to the relatively recent application of acceleration to populations of at-risk students, there are no studies that have examined the effects of accelerated learning programs on other students with special needs. Vaughn et al. (1996) suggested that research needs to be done considering the long-term effects of inclusion models on students with learning disabilities when social and academic outcomes are examined (p. 608).

Research on the affective and social elements of acceleration needs to be executed in a more holistic manner. Given the nature of learning itself, studies that effectively combine qualitative and quantitative data would be most appropriate, using instruments that are more stringent and also versatile in nature (Whinnery et al., 1995). The social outcomes for students are multifaceted and complex, and therefore future research should strive to be much more sophisticated and responsive than that which has been produced to date.

The struggle to maintain cultural integrity for First Nations people is an everyday reality. By incorporating a program of instruction such as the ALP into community schools, a renewed interest may be stimulated in the process of learning on the part of students who are the next bearers of culture and history.

After an extensive review of the range of learning and developmental challenges with which a child may have to contend, Cashdan (1970) wrote that regardless of the

disability or setting in which they find themselves, low-achieving students will need individually designed programs (p. 393).

Accelerated learning programs provide an example of an intervention that allows low-achieving students to gain control over the learning process (Borkowski et al., 1989).

By attempting to improve motivation and attributional states, metacognitive awareness, and self-regulated learning in low-achieving students, acceleration is able to combine clear and individually tailored instruction on "how to learn," with strategies to improve motivation and self-concept in the learning context. This approach also attempts to change children characterized as exhibiting "learned helplessness" into mastery-oriented, self-regulated learners.

CHAPTER 3

DESIGN AND METHODOLOGY

Rationale and Research Questions

This study examines the efficacy of the Accelerated Learning Program initiated at two First Nations community schools in northern Alberta. The goals of the project are twofold. The first is to monitor the academic and personal growth of students by following the trajectory of their achievement through regularly administered standardized tests, while obtaining a subjective perspective of their growth from the people who surround them. Given that an evaluation of the effectiveness of the program cannot be conducted separately from the school system or community of which it is a part, these questions are examined within the context of the transformation of local education in general (Guess & Sailor, 1993; Matthew & Kavanagh, 1999).

Second, I aimed to elicit the factors that inform a student's ability to perform at school. This research has been conducted on the assumption that student performance emerges as a function of the "whole child" rather than merely his or her intellectual ability. In reference to the body of students in question, this study seeks to establish what factors in the lives of students shape their ability to become engaged in school to their full potential. The purpose of this endeavour is to contextualize the efforts of the Accelerated Learning Program and mainstream programs in which students participate, as well as the academic results of this participation.

Therefore, the questions posed by this study are as follows:

1. How does the Accelerated Learning Program assist First Nation schools to overcome the challenges they face in meeting their goals for education?

2. What are the main factors that inform the ability of students in the program to perform academically in a community setting?

In order to meet these goals, an interdisciplinary approach was chosen that involves both ethnographic and quantitative data collection. This choice stems from the position that the growth of a child can best be understood in a systematic framework in which the relationships between child, school, family, and community are made explicit. Research methodology that utilizes both types of data has assisted in meeting this goal.

Definitions

In contrast to the largely decontextualized, static conception of special needs that often underlies research in special education, I have adopted a working definition that is based upon a broader, more ecological view to special needs, as proposed by Keogh and Weisner (1993). Their approach examines student at-risk factors holistically by taking into account factors that affect the development of the whole child, not just factors that are readily visible and within the easy reach of the teacher. The child is conceptualized as a total subject, and all aspects of the self come into play in the learning context: the intellectual self, affective self, physical self, social self, spiritual self, and so on. If a student's self-conception (in this case, particularly his or her self-concept in the learning context) involves the interplay of all of these elements of the self, then these same elements must at least be acknowledged in the school domain.

The main focus of the study is the Accelerated Learning Program; however, the scope of intervention extended to the homeroom class, school system, home, and community. With this in mind, this study has been conceptualized as an examination of two oppositional flows. The first flow sees the school as an investment in the community

and focuses on its ability to empower individual students. By contributing to the empowerment of the individual, the school effectively contributes to the development of the First Nation by preparing the citizens of tomorrow (Calliou, 1993).

From the opposing direction, a second flow is evident. Trends that characterize life and change within a given community play out in that community's school in several ways. Most immediately, factors that inform the quality of a student's life in every domain—the home, the family, the peer circle, the community—also inform the ability of that student to become fully engaged in the learning context.

For the purpose of this study, *accelerated learning programs* is defined generally as those interventions seeking to meet the needs of individual students through a cycle of diagnostic testing and prescriptive teaching (Benbow, 1991). A specific definition of the program developed by the staff of the school in question and me has been developed on site and is discussed in depth in Chapter 2. The term *parents* designates those members of a child's family related by consanguinal or fictional ties who are most frequently involved in the child's education and care.

Triangulation is used to refer to cross checks that are built into a qualitative design to verify that the data are valid and effective representations of the phenomenon being measured (Schensul, Schensul, & LeCompte, 1999). The *reliability* (or *internal consistency reliability*) of a test refers to its precision and consistency of measurement, and the *test-retest stability factor* refers to the extent to which the test solicits identical results on its reapplication to the same subject (Wechsler, 1991a, 1991b).

Content validity is defined as the extent to which a test represents the domain of content that it is designed to measure (Woodcock & Johnson, 1989). *Concurrent validity*

refers to the correlation of a test's IQ scores with other measures of achievement (Wechsler, 1991b). Finally, *criterion-referenced validity* is defined as the degree to which scores on a given test relate with scores on another independent measure described as the criterion (Webster, 1984). Two threats to design validity are discussed herein, including *testing confounds*, in which subjects alter their responses to test questions as a result of being overfamiliar with the test in general; and *diffusion*, in which informants in a given population alter their responses to questions in qualitative interviews as a result of being exposed to the questions asked of a second population (Bernard, 1988).

Research Sites

Research was conducted at two sites over a three-year period. The sites were chosen due to their distinctive but also comparable histories and circumstances, their experience with the program, and their accessibility. Both schools are located in communities that are members of a tribal jurisdiction in north-central Alberta. Although the Accelerated Learning Program is currently operating at both schools, the program at the first school was in its fourth year of operation when the study was carried out. The program at the second school is relatively new.

Participants consisted of two groups of students (experimental and control) from two rural First Nation community schools. The students had similar cultural backgrounds and socioeconomic levels. Both communities are somewhat equivalent with regards to their existent infrastructure, band administration, employment opportunities, housing, extracurricular activities and proximity to an urban centre. Both schools are managed by their elected/nominated school boards and supervised by the elected Chief and Council. The general education programs follow the Provincial curriculum guidelines, and this

promotes a degree of continuity for students who tend to transfer frequently between the community schools.

The experimental and control groups consisted of 12 students each from a Grade 3 class in each school. These students were identified by a multistage screening process that included formal and informal testing and interviews with teachers, students, and parents. Because the control group had a greater number of students, they were randomly assigned by having their names drawn from a hat by the Director of Education. The experimental group was comprised of 12 students in total. All participants in the research study were deemed to be underachieving, but their underachievement was not due to a serious handicap, mental retardation, or any other identified special education primary handicap such as emotional disturbance, hearing, or visual impairments. Participant age ranged from 8 years, 10 months to 9 years, 4 months, in the fall of 2000.

Methodology

Quantitative Data

The hallmark of the controlled experimental method is that variables of interest (as causes) are manipulated directly. In addition to the manipulation of the relevant variables are the features of random assignment and the use of control groups or conditions to eliminate the effects of third variables. The pre-test/post-test control group design was selected because it provided some control for the sources of internal validity, such as history, maturation, pre-testing, measuring instruments, statistical regression, selection bias, differential attrition and selection, and maturation interaction.

The trajectory of student achievement was monitored through the use of a variety of standardized tests. A baseline measure of student achievement was taken at the end of

the academic year previous to each student's first academic session in the Accelerated Learning Program using the *Woodcock-Johnson Psycho-Educational Battery (Revised Edition, 1989)*. At the end of each subsequent year of programming, postintervention assessments were completed using the Broad Reading, Broad Math, Broad Knowledge, and Broad Written Language scores of the *Woodcock-Johnson-R*, as well as the Verbal Comprehension factor score of the *Wechsler Intelligence Scale for Children (Third Edition, 1991)*, and the *Alberta Provincial Achievement Tests (1997, 1998, 1999)*. Forms A and B of the *Woodcock-Johnson* were used with students in alternate years to avoid the testing confound to validity. All the participants had been pre-tested in the fall of 2000, using the WISC-III and the *Woodcock-Johnson-R* batteries (Forms A). Post testing was completed in the spring of 2001 using the WISC-III and *Woodcock-Johnson-R* batteries (Form B). Thus there was approximately a 10-month interval between pre- and post-tests. Through the consistent application of this testing regimen, a stable measure of students' academic growth over a three-year period was assembled.

The instruments used in this study were chosen, in part, on the basis of being well developed and established in the field of educational psychology. The tests in question included:

- the Wechsler Intelligence Scale for Children—Third Edition (Wechsler, 1991b), a measure of ability;
- the Woodcock-Johnson Psycho-Educational Battery—Revised Edition (Woodcock & Johnson, 1989), an achievement test that provides a comprehensive and reliable measure of achievement; and

- the standardized Provincial Achievement Tests of Alberta (Alberta Learning, 1998, 1999, 2000).

The Wechsler Scales of Intelligence, including the *Wechsler Intelligence Scale for Children (Third Edition)*, are grounded in a global conception of intelligence in which the subtests that measure a range of abilities can be considered cumulatively as an estimate of a child's general intellectual ability (Wechsler, 1991b). The *WISC-III* is a collection of 13 subtests that are divided into two scales—a Verbal Scale and a Performance Scale. The verbal subtests of the *WISC-III* yield reliability coefficients from the high .70s to the mid .80s (Wechsler, 1991b). The test's scores have been shown to hold adequate stability over time and across age groups and feature test-retest stability coefficients ranging from the mid .60s to the low .80s for students aged 6 to 7 years, from the mid .70s to the high .80s for students aged 10 to 11 years, and from the low .70s to the high .80s for students 14 to 15 years of age. Tables of reliability included in the Canadian version of the test indicate that the test is highly reliable when used with Canadian students (Wechsler, 1991a).

A review by Little (1992) indicated that both exploratory and confirmatory factor analyses support the validity of the *WISC-III* structure. The theoretical and structural framework of the *WISC-III* remains generally identical to that of its predecessor, the *WISC-R*, correlations being .89 for Full Scale IQ, .90 for Verbal IQ, and .81 for Performance IQ (Braden 1995; Little, 1992). However, both the *WISC-III* manual and recent research indicated that there will be significant declines in the Verbal, Performance, and Full Scale IQ *WISC-III* scores of low-achieving students with previous *WISC-R* scores (Post & Mitchell, 1993; Schultz, 1997; Slate, 1995; Vance, Maddux, Fuller, & Awadh, 1996; Wechsler, 1991b). These authors warned that students may be in

jeopardy of losing their placement in special education programs in which placement decisions are based on such data.

Post and Mitchell (1993) suggested that the Verbal IQ score is in all likelihood a more accurate predictor of a child's academic success in school than is the Performance IQ score. Users of both the revised and the third editions of the test may recognize the attempt to reduce the bias inherent in certain items of the latter in light of language demands (Little, 1992). Wechsler (1991b) indicated that the *WISC-III* was normed with several non-Anglo-European populations, including Native American students. Despite these revisions, however, the criticism that the test penalizes certain populations of cultural- or linguistic-minority students remains, with the charge that the culture-laden verbal subtests may result in a lower Full Scale IQ score (Post & Mitchell, 1993; Tempest, 1998). In a study designed to expand Navajo norms for the *WISC-III*, Tempest (1998) examined how the subtest scores of 334 Navajo students compared to those of the standardization population in regard to language proficiency. Navajo students proficient in English had higher *WISC-III* Verbal scores than those who were merely functional in English did; however, the vocabulary score of the former population was significantly lower than that of the general standardized population. Tempest found that the general deficit revealed by this population lay in the Verbal Comprehension and Freedom from Distractibility factors; however, as the latter includes two verbal subtests, Tempest argued that the factor may not be a valid measure for Navajo students. In a discussion of treatment validity, Tempest concluded that local/cultural norms should be taken into account when using *WISC-III* scores and profiles to establish instructional and programming needs of Navajo students (Tempest, 1998).

The *Woodcock-Johnson Psycho-Educational Battery Revised (WJ-R)* features a wide-range comprehensive set of tests designed to measure cognitive abilities, scholastic aptitudes, and achievement (Woodcock-Johnson, 1989). The reliability and validity features of the battery meet basic technical requirements for both placement and programming needs (Woodcock & Johnson, 1989). In terms of internal consistency reliability, the *Woodcock-Johnson* tests (Form A and Form B) generally yield internal coefficients in the high .80s and low .90s. Efforts to establish the battery's construct and concurrent validity are discussed in the manual and in several review articles. Construct validity of the test was generally revealed through an extensive consultation process with outside experts (Webster, 1984).

Recent studies were available that examined the criterion-referenced validity of the two tests in question. A number of recent studies have reported correlations between the IQ scores and indices of the *WISC-III* and comparable measures from other batteries, indicating good concurrent validity. Further studies support the predictive validity of the test, the manual in particular reporting appropriate correlations with future achievement (Braden, 1995; Wechsler, 1991b). In relation to the *Woodcock-Johnson-Revised Tests of Achievement*, concurrent validity has been explored using several different anchor measures (e.g., Wide Range Achievement Test). Correlation of achievement clusters is generally in the .50s and .60s at the age 3 level and in the .60s and .70s at the age 9 to 17 levels (Cummings, 1995; Webster, 1984; Woodcock & Johnson, 1989).

Nonetheless, and despite the widespread use of both tests, there are relatively few studies that specifically examined the correlations of the *WJ-R* battery and the Revised or Third Editions of the *WISC*. In fact, there appears to be only one study that reported

correlations for the *WISC-III* and *WJ-R* (cf. Davis, Parr, & Lan, 1997; McGrew & Pehl, 1988; Schultz, 1997). The 1997 study by Schultz sought to examine the relationship between *WISC-R* and *WISC-III* scores and to subsequently describe the relation between scores from both of those tests and scores on the *WJ-R*. The participants included 62 students involved in special education services in the learning disability program of a school district in North Carolina. Scores from *WISC-R* tests administered three years previous to the research session were compared with current *WISC-III* results and scores from the *WJ-R Tests of Achievement*. The correlations between *WISC-R* and *WISC-III* IQ scores were .71 for Verbal IQ, .76 for Performance IQ, and .76 for Full Scale IQ. The correlations between *WISC-III* Full Scale IQ scores and the *WJ-R* achievement scores were .65 for reading, .70 for math, and .71 for written language. The correlations of the *WISC-III / WJ-R* scores were consistently but not significantly higher than the earlier *WISC-R / WJ-R* (Schultz, 1997).

Finally, the Alberta Provincial Achievement Tests are measures of student achievement in relation to each course of study as set out in the relevant provincial curriculum standards. *Assessment standards* are the criteria adopted for judging actual student achievement relative to curriculum standards; *achievement standards* are judgments which specify what percentages of students are expected to meet acceptable or excellent levels of achievement (Alberta Education, n.d.).

Pre- and post-test *WISC-III* verbal, performance, and full scale IQs, together with verbal comprehension scaled scores and *WJ-R* achievement test scores, were available for all participants in the study. Three analyses were performed on the data.

First, means and standard deviations were computed for the experimental and control groups to examine pre- and post-test profiles. The second approach used was a 2(group) x 2(time) analysis of variance (ANOVA), with the last factor repeated, to ascertain if there was a significant effect for those participants in the study who had been exposed to the ALP. Finally, means obtained on the group achievement test (Provincial Achievement Test-Reading, Writing, and Math) were then compared statistically using a 't'-test for independent samples.

Qualitative Data

The qualitative discussion to follow describes an exploratory line of inquiry that was conducted in the spring of 2000, during the first year of research. During subsequent years, specific themes revealed through this process became the focus of the study. Research using the design and methodology plan which follows was conducted in the first research site, and an abbreviated version was conducted at the second. More specifically, the quantitative methodology outlined below has been applied at both sites; although the full qualitative design was conducted only at the first school, a truncated version applied subsequently at the second.

Qualitative data were collected from each main group of stakeholders of the local education system: students, parents, teachers, ALP staff, community members, members of the Band and Tribal Councils, and on-site specialists.

Proper adherence to standard and locally defined issues of confidentiality were exercised throughout the study. Each group was given detailed information on the purpose of the study, their role as informants (e.g., topics that will be brought up in interview, time commitment, and compensation), and the manner in which personal data

(e.g., test scores, data retrieved during interview) and research findings were to be used.

The following measures were taken to ensure confidentiality:

- A consent form was provided and read to informants at the beginning of each interview.
- A copy of the interview transcript was offered to informants for comment and correction.
- Personal names and details that could potentially be used to conclusively identify the individual were altered in all reports and publications to follow.

Following the review of the consent form, each interview began with the collection of personal information for the purpose of contextualizing the data offered during the interview (such as the informant's personal background, education, and employment history).

Because the study involved extensive interaction with each community and its children, this early stage was conducted in collaboration with a local liaison worker who was well known and respected in the community in question, fluent in Cree, and familiar with local history, clans, and protocol.

Various methods were employed to ground the research in the reality of the populations under study and to ensure the consistency between findings and the programs, school systems, and communities in question. Qualitative instruments (including interview questions and observation schedules) were developed on site.

Document searches and interviews with key informants were performed with the purpose of grounding research questions in relevant local history and concerns. A degree of redundancy was been built into the design in order to provide a valid view of the factors

that inform student performance at school. Themes raised in student interviews were also broached in the context of the interviews with their parents and teachers. Also, a profile that examines individual student growth over a given period was filled out by each student's teacher. The child was also observed in the resource room setting. Finally, the questions raised in individual interviews with teaching staff and paraprofessionals were re-examined in the context of focus-group discussions.

Four main groups of informants were interviewed, namely:

- teachers employed at the community's school who had participated in the program;
- students who had participated in the program for four months or more, regardless of whether they were currently enrolled in the program or not;
- parents of students in the second population; and
- key informants.

Given the relatively small size of the populations involved, samples were not used, and all willing members of each were included. Students were included in the study on the condition that at least one parent was also willing to participate; as many members of a given child's family who acted in this capacity and who were interested in participating in the study were included. Diffusion between members of the student and parent samples was not a problem because different interview schedules were used for each group.

In order to gain an understanding of the manner in which this particular school had integrated the program into its structure and routine, a brief period of informal

observation was carried out in general classrooms and the resource room. The objectives of this exercise were:

- to observe how the program functioned in each particular school;
- to gauge how personnel, resources, and time in the general classroom were allocated to accommodate students with special needs;
- to monitor the coordination of instruction between the ALP and general classrooms; and
- to provide an opportunity to observe how 'real' behaviour contrasted to the 'ideal' that perhaps would be reported in interview.

Background research was conducted through informal interviews with key informants. Key informants included members of the school administration and board, teacher assistants with experience in the Accelerated Learning Program, on-site specialists, and community members. Questions focused on the following themes:

- the demographic make-up of the community;
- major events, trends and shifts in its history; and
- the recent history of education in a local and regional context.

This information was complemented by the collection of relevant demographic and statistical data (e.g., breakdowns on the community's population, its growth, and trends). Informal interviews were conducted with a second group of key informants; namely, teacher assistants, the ALP coordinator, the school principal, and other individuals who had had extensive experience with the program, but who were not to be included in the three main populations of informants. Questions used in interviews with teacher assistants focused on the quality of their experience in the program (i.e., whether

it has had an impact on their view of themselves and their role in the school). Topics broached in interview with the school principal focused on their role in the development and management of the program. Finally, the interview held with the two ALP coordinators focused on their philosophical and managerial approach to the job of coordination, the strengths and weaknesses of the program at that point in time, and how they would like to see the program develop in future.

Following this early stage, semistructured interviews were conducted individually with teachers for the purpose of understanding their experience with the program.

Interview topics broached informants':

- initial understanding of acceleration, accelerated learning programs in general, and this accelerated learning program in particular; and how their understanding changed over the course of the implementation of the program;
- their impressions of the academic efficacy of the program;
- their impressions of the effect of the program on the social and emotional development of students;
- their view of the "special needs" that they saw present in the classroom;
- their view of catalysts and impediments to student engagement in school;
- information on what type of support was available to teachers in their attempt to meet the needs of the whole child; and, finally,
- their view of the place the program had come to occupy in the ethos of the school as a whole by the time of interview.

In light of the possibility of diffusion among teachers and administrators, all interviews were carried out within the space of two weeks. In addition to individual interviews, a

focus-group discussion was held for the purpose of eliciting group feelings towards the effectiveness of acceleration in general and the mechanics of the program, and also to check the reliability of what was reported during interviews (Abrams & Ridley, 1994).

Individual semistructured, open-ended interviews were conducted with student informants. The goal of this exercise was to elicit and contextualize the issues that had informed the students' experience of the program and of school in general. Each interview sought to elicit students':

- impression of the impact of the program on their learning style and achievement levels;
- opinion of how their needs were met in the classroom and resource room;
- view of the impact of attending the resource room on their self-confidence and social life;
- characterization of time spent in the general classroom and resource room;
- degree of engagement in the school endeavour; and
- goals for education.

Each student's teacher was asked to complete a student profile for the purpose of reviewing the student's performance and growth over the past year.

Semistructured interviews were held with parents of ALP students in order to elicit their expectations and opinions of the Accelerated Learning Program, especially against the backdrop of their own educational experiences. Discussion topics included parents':

- impression of how the program had affected their child(ren)'s academic performance and personal growth;

- expectations and goals for their child(ren) in terms of education in general; and
- opinion on the place of the school in the rest of community and family life, and how this has changed over their lifetime.

The fact that the qualitative data were collected by an individual researcher ensured that the same interview protocol (which was developed on-site) was followed with each informant and population. Thus, the means of obtaining and interpreting information have remained somewhat constant throughout the study.

Interview and focus-group discussions that were recorded were prioritized in terms of their ability to shed light on the main research questions. The majority of interviews and focus-group discussions were transcribed for the purpose of analysis. No transcript was taken for interviews on topics deemed of lesser priority because of time constraints and/or issues related to the quality of the tape recording; however, these discussions were reviewed and notes taken. Inductive analysis was used to elicit common themes as they related to the two main research questions. A protocol was developed that charted the relation of particular themes to the research questions. Transcripts and interview notes, observation notes, and student profiles were reviewed and information sorted using this protocol. Next, the information pulled in relation to each theme was reviewed for consistency across informant and data source. Please note that, despite the linear direction implied by this description, the process of data collection and analysis in fact proceeded in a dialectical and often disjointed fashion.

Throughout the data collection and analysis stages, decisions were made to include or exclude informants or interviews from the study in response to several

circumstances. The size of the population of parent informants decreased considerably throughout the research session due to the difficulty in locating some people initially or at the time of interview. Additionally, several interviews were excluded at the time of analysis, due to poor audio quality.

In several cases, parent and key informants readily consented to participate in an interview but were very guarded and reluctant to respond as the interview proceeded. The impression of the researcher was that, in certain cases, the milieu was deemed inappropriate by certain participant for particular topics to be broached. In other cases, there were issues that people deemed inappropriate for discussion with a relative stranger. Further, several student informants, although repeatedly apprised of the option of *not* participating in the study, were too reluctant to fully engage in the conversation when it came time. In all these cases, the interviews were reviewed once for relevance, notes were taken where applicable, and the interview was excluded from analysis.

Design Validity and Limitations

Several aspects of the study design lend themselves to an assertion of the validity and reliability of its results. A series of documents were examined to review the demographic and historical context of the school and community against the information provided by parent and teacher participants, and key informants. Triangulation was factored into the design through the application of consistent schedules of questions in interview with each group in question, excepting key informants. Key data brought up in interview, focus-group discussion, and student profiles were checked against interview data from secondary sources, as well as through informal observation. The protocols

developed for use in interview and in analysis were applied consistently due to the fact that both were conducted by a single researcher.

One problem with the design resides in the restricted amount of formal observation conducted. Additional time observing the Accelerated Learning Program in action would have allowed a more substantial picture of individual student progress to emerge. This would have proven an invaluable check against the information regarding student progress provided in individual teacher interviews and through student profiles. This time would also have provided the researcher with a more in-depth understanding of the variety of experiences of teacher assistants in the program.

An additional problem with the analysis stems from a lack of attention given to correlating the information related to individual students. This step was simply out of the scope of the resources available. However, it would be interesting to assemble the interviews, student profile, observational notes (where available), and quantitative data (i.e., assessment results) associated with individual students in the effort to chart their growth.

The scope of research conducted at the first site was far more extensive than that completed at the second, largely due to restraints in accessibility. Because one of the main purposes of this session was to elicit the general factors that shape student achievement in this setting, however, I feel that the context of the two communities is similar enough to warrant the generalization of results from the first to second site. Future research that examines particular themes or variables will be conducted at each site for comparative purposes.

Conclusion

This methodology was executed at each research site. By combining the variety of methods outlined above, a representative and clearer understanding may emerge with regards to how the Accelerated Learning Program may have affected the achievement and personal growth of children in each of these communities.

The following chapter presents the philosophical framework and instructional methodologies that form the basis for the Accelerated Learning Program.

CHAPTER 4

THE INTERVENTION

Program Rationale

Tell me, and I'll forget. Show me, and I might remember. Involve me, and I'll understand. (Chinese proverb)

Educating all children—especially the low achieving—as if they are gifted is a remarkably important, if rarely considered, idea. Gifted and talented students are currently provided with educational experiences that are, in fact, essential for the cognitive development of all children. At the other end of the spectrum, there is a growing realization that general education classrooms are excellent learning environments for many students with special needs, as long as sufficient support services are provided.

Numerous children who early in their educational journeys were placed in special education programs have not made sufficient progress; and, indeed, this population ultimately forms a large percentage of those who drop out of school. The commonplace, but too often inappropriate, educational practices that are designated for students selected for special assistance often have distinctly negative effects on their achievement and self-concept. Although the principles and foundations of the field of special education influence the education of children labelled as “learning disabled” and “slow learners,” many more curriculum and placement decisions are made for youngsters with learning problems in general education that are shaped by poorly considered philosophical notions. Many such practices have produced results that are currently questioned by

parents and leaders in the field, because it is obvious that children are not learning as well as they might.

First Nations students often enter school with an already considerable disadvantage. Those who come from relatively underprivileged backgrounds do not receive enriched learning opportunities during the early years of development; nor do they receive good medical care, proper nutrition, or many other conditions that are necessary foundations for learning. Furthermore, these children normally do not have equal opportunities to "learn how to learn," and many of them do not bring "school readiness skills" to the learning environment. Thus, when these students enter a school system that is unable to provide programming that is appropriate and responsive to special needs, their chances of achieving success at school are greatly diminished.

The Accelerated Learning Program (ALP) has been designed to assist schools in the attempt to address several interrelated issues that have characterized locally controlled education to date. In recognition of the complexity of problems faced by First Nations children, the program takes a holistic approach to understanding children's development and the factors that inform their performance at school (Guess & Sailor, 1993; Matthew & Kavanagh, 1999). ALP seeks to improve achievement levels while fostering the development of an independent, self-regulated approach to learning and a positive self-concept. In this way the program views academic achievement as intimately tied to the personal growth and empowerment of the individual and, as that child gets older, the community.

Acceleration

From a teacher's perspective, many of the key elements of the Accelerated Learning Program can simply be said to emerge from the general project of teaching. Given the demands and strictures placed on today's classrooms, however, the program is able to see through those ideals that are often simply no longer feasible in general education.

The purpose of the Accelerated Learning Program is to provide individualized instruction to students in Grades 1 to 6 in those areas of language arts presenting the most difficulty, particularly those related to literacy. Individual programs are created for students based upon their strengths and weaknesses, as identified through formal and informal testing procedures. Student progress is fostered through a cycle of assessment and instruction: a flexible and responsive process that allows ALP staff members to track and adapt to individual students' changing ability level. The program also seeks to provide enrichment to low-achieving students through a stimulating variety of multimodal activities, rather than to simply remediate perceived skill deficiencies through repetitive and monotonous drills. Students are encouraged to work through an area in the curriculum at their own pace, but are challenged to become independent and motivated in the learning context, even in those areas of learning that they find the most difficult.

The rationale behind "acceleration" begins with the idea that learning is a sequential and developmental process that will manifest as a completely different experience for members of any given age group. Effective learning occurs when an appropriate match is established between the curriculum and children's level of ability, knowledge, and experience. Students visit the resource room for individually based

tutoring in those skills areas where they are below grade level. A period in the ALP room involves a rapid succession of exercises that vary in the learning modality targeted, but focus on a given skill. Students are given immediate and positive feedback throughout the period, each activity being corrected immediately upon completion. Through the use of regularly administered diagnostic tests, children are required to demonstrate their mastery of a given skill level before being allowed to move on to the next skill in sequence (Benbow, 1991, p. 160). Referred to as *mastery learning* or *continual progress*, this process allows students to move successfully through a particular body of knowledge at their own pace. Once they have demonstrated that they are functioning at a skill level comparable with that of their classmates, they are then reintegrated into the general subject program.

Learning by Doing

John Dewey (1980) believed that the role of education was to find the individual's aptitudes and train him or her. School, in his view, is not a preparation for life, but is life *itself*. Children "learn by doing" through purposeful actions which they determine. In early childhood, the use of play, construction, tools, and contact with nature, combined with oral and written expression, are the bases for learning.

To a considerable degree the ALP setting can be characterized as student-centred. Many teachers find this aspect challenging in the general education setting. Control over the learning process is left very much with the teachers, and they often have difficulty maintaining control over student behaviour.

A lynchpin of the program is that students are encouraged to assume control over the learning process and their achievement. The program is structured by the coordinator,

but activities are, in fact, carried out by students and teacher assistants. At a structural level, emphasis is placed upon the integration of active learning, subject matter, and individually determined purpose. On the ground, the emphasis is on student planning and problem solving, cooperative learning, and self and group decision making and evaluation. Student creativity and the exploration of individual interests are encouraged and incorporated into learning tasks as much as possible. When implemented well in the resource room, it is wonderful to watch.

Language and Early Childhood Development

There is still a widely held belief that language is developed well enough by age five that reading can be safely introduced in the first grade. Little attention has been paid to the development of phonic abilities at the receptive/oral level of language, despite the fact that almost all early reading materials commence with phonic instruction. The failure of reading programs that are based solely upon a phonics approach with many children may be explained through systematic research into the receptive language competences with which most students arrive at school. If this attribute is not sufficiently developed in all areas of language acquisition (i.e., sound, word, grammar, and meaning), students may experience great difficulty learning to read.

Whole-language theorists (Edelsky, Altwerger, & Flores, 1991) have questioned the direct hierarchical relationship between oral and written language, arguing that if the qualitative aspects of oral language are meagre and if there are unique problems in "cracking the code," it becomes difficult to use written language to enhance receptive language and, in particular, to do so quickly enough to protect the learner's motivation in the learning context. These theorists provide an invaluable model of developing written

language just as oral language is developed; namely, as communication based on *use* in natural exchanges.

The education of students with learning difficulties often focuses on written language (reading, writing, spelling, and handwriting), and too little attention is paid to oral language as a basis for this secondary symbol system that students must master. The Accelerated Learning Program also takes the approach that reading is best considered more broadly in relation to receptive language. If a student looks at a word and lacks phonological awareness, he or she will likely be unable to relate the symbols on the page to auditory language. Hence, one of the tenets of the program is the use of teacher assistants and peer groups in facilitating receptive oral language development.

The program's philosophy also maintains that reading instruction is best commenced with an expansive inventory of the receptive oral language base with which each student arrives, with the amount, mode, and quality of the oral experience in each social domain taken into consideration. Teachers should examine, in other words, the amount of early mediation in learning that the student has received at home and should know how much attention to early language development took place in the student's home. Student ability at each level of language competence should also be evaluated.

Following Vygotsky's (1970) lead, the social element of instruction in ALP is also critical to the acquisition of literacy skills. Feuerstein (1980) described mediation as interventions or teachings by adults and other individuals in the child's life that focus the child's attention, pace the learning, reinforce approximate achievement, and model behaviours. The author suggested that mediation of learning was a critical factor in the development of cognitive abilities and argued that the invariant stages of development

may occur in some children, not because they are deficient, but because mediation in the learning context is insufficient. Within the program, mediation between students and teacher assistants and between teacher assistants and parents is actively solicited and encouraged.

The fields of psycholinguistics and whole-language instruction promise to broaden our conception of written language instruction and acquisition, to the point where written language is considered alongside oral language *primarily* as a mode of communication. For the whole group of students who do not profit from isolated phonics instruction, this approach may be more conducive to learning to read.

Modality Processing and Direct Instruction

The ALP program combines modality-processing instruction and direct instruction in a holistic manner that provides relevant and enriching experiences that enhance learning. This dual mode of instruction emphasizes that language or math content must be presented in such a way that mistakes are seen in the context in which they occur.

Research has overwhelmingly found that instruction that utilizes a physical skill or training in the visual, auditory, and kinesthetic modalities, in isolation from the subject matter in which those skills are required, does not contribute to the generalization of those skills or to improved academic performance in that subject area. Parents frequently describe programs that provide instruction in modality processing as being beneficial for their children, because they can identify improvement in whatever skills were practiced. However, for the majority of cases, they also agree that the child's school achievement does not increase commensurately.

Thus, as a rule of thumb, it might be more beneficial to consider that "meaning and memory always interact": The more meaningful the content, the more likely it is to be remembered. The "direct instruction" mode focuses on task analysis involving oral language, written language, or math skills as *content*, rather than that which sees students practicing the processes of seeing, hearing, feeling, discriminating, sequencing, or remembering with out-of-context content.

Direct instruction is based on a theory of "linear" learning, in which subject matter is presented as a series of tasks arranged from the simple to the complex. The student learns to master easier or discrete tasks before using the total process. In reading, for example, phonic instruction typically precedes comprehension; thus, most "reading" time is actually spent on decoding exercises, learning the relationships between sounds and symbols, and practicing sounding out the words. In this context, the hope is that students will be able to independently and spontaneously transfer the skills involved in directed tasks to other learning tasks.

Although students can sometimes easily negotiate more complex processes while still having difficulty with isolated skills, direct instruction holds that time should be spent complementing the instruction of simple facts and skills with that of higher level processes. The question of what balance should be maintained between "bottom-up" and "top-down" instruction needs to be answered on an individual basis, with professional staff ideally being able to apply either approach given the needs and proclivities of each given student. Too often when this approach is adopted, instruction tends to proceed from the bottom to the top of the ladder of tasks. When instruction focuses on only one level of processing (for example, when a relentless emphasis is placed on phonics), students often

become frustrated and bored when they are unable to reach the higher level processes; moreover, generalization of those lower rung skills does not occur. On the other hand, this might improve if the processes from top to bottom were also taught simultaneously, with students being made aware of how and why they are learning each way. Until reading is regarded as communication rather than as a solely hierarchically arranged set of skills, the transfer of training in literacy interventions will remain a significant problem.

The Affective Component of Learning

Many children are stigmatized when they are required to leave the classroom for special assistance. In many cases, this has a severely depressing effect on their self-esteem, self-concept, and motivation. Adelman (1989) has criticized the curriculum in special education in general, stating that the field must "expand prevailing approaches to individualizing instruction so that intrinsic motivation is accounted for in a systematic and comprehensive manner" (p. 10).

The Accelerated Learning Program strives to accommodate the affective component of learning, with the ultimate goal of encouraging students to become self-regulated learners. Every effort is made to provide students with daily opportunities for success and challenge. Staff members strive to create a learning environment that is consistent, structured, and predictable, with room for the flexible accommodation of the various challenges posed by factors in the students' lives, as well as that of the school community. Within this environment, students are encouraged to take control over the learning process with the support of a peer group and instructor. Through the application

of consistently high expectations and training, students are taught to manage a high volume of activities in a largely student-controlled learning space.

The Social Component of Learning

Without the benefit of formal training as teachers, the significance of the expanded role expected of the teacher assistant in this program cannot be underestimated. Teacher assistants function in all ways as teachers, with the benefit of their own varied experience in the education setting, their experience as community members, and the constant support and supervision of the ALP coordinator to back them up. On a daily basis, TAs draw on their relationship and knowledge of their students to assess their areas of strength and weakness, learning styles, and mood or disposition as they arrive and are set down to work. TAs assist in daily planning, conduct formal and informal evaluations of student progress, and are critical in this way to maintaining the 'fit' between a given student's needs and his or her program.

The significance of the relationship between ALP instructor and student is its quality. Students are encouraged to learn in an environment that the staff strive to make safe, predictable, dependable, and trustworthy from a student's point of view. With tacit acknowledgment of the complexity that often characterizes the lives of students who attend ALP, teacher assistants are encouraged to nurture a close relationship with their students despite the brevity of their daily time with them. It is recognized that ALP instructors must often address many of the issues that students bring to school from their life at home or among their peers, which may in fact impede their ability to function in the learning setting. More generally, against the background of the growing teacher-student ratio in general-education classrooms, this is often the only relationship with an

adult in a position of authority that is possible in the school context. Students come to expect consistency not only with respect to programming and the set of expectations placed upon them, but also in terms of their relationship with their ALP instructor.

The Accelerated Learning Program Process

The following describe the various streams of intervention that underscore programming in ALP.

1. Validating strengths, interests, and talents: Initial programming for each student involves the creation of a plan that validates a strength, a choice, an ability, an interest, or a skill. In typical remedial interventions this rarely occurs, due to the assumption that, because the student already possesses various strengths, it is their "deficiencies" that need to be addressed. The dropout process often begins quite early for low-achieving students unless schools and parents place a great deal of positive value on student *abilities* and make certain that optimum conditions for learning are maintained. Given that low-achieving students are more likely to be aware of their "deficits" than their strengths, this assurance and validation are all the more important.

2. Addressing undeveloped skills: Initial programming also involves planning to meet a need or to address areas of undeveloped skills. This aspect involves identifying a student's current skill level, setting realistic but challenging goals to build on that level, and selecting appropriate materials, methods, instructors, and learning environment.

One problem in remediation is that instruction may focus on skills that in reality take an inordinate amount of time to improve (e.g., handwriting). Error analysis, with no more than two components chosen to practice, can make a tremendous difference.

3. Balance in curriculum focus: Programming typically involves an attempt to achieve a balance between remediation (repetitive drill and practice) and enrichment (building and building upon an experience base), both being seen as necessary to the learning process.

The Accelerated Learning Program considers the teaching of a broad range of thinking skills and strategies as critical to success in learning. Growth in more complex levels of learning can be monitored through creative and formal writing assignments, and tests in social studies and science, whereas lower-level skills identified in student IPPs are monitored through a variety of tasks administered day to day.

4. Setting priorities: Although the Accelerated Learning Program takes a holistic approach to child development, skill or developmental areas are selected as instructional priorities to provide focus and structure to each child's program.

5. Considering options: Placement options are often limited in northern school settings, but there is often a wide range of curriculum options available. During the development of ALP programming for individual students, parent and community consultation was critical. Parents often provided valuable information on program modifications that had been previously applied to their children's programs. From the other end, ALP staff also devoted considerable time to educating community members about the options available among school and band services.

ALP and the School Community

The Accelerated Learning Program was conceived to be one element in a schoolwide system of support for students with needs that extend beyond what the mainstream classroom is often equipped to handle. The program is often adopted by

schools as part of initiatives to provide the dynamic, holistic solutions necessary to address the matrix of issues that inform student development (Abrams & Ridley, 1994). Further, by offering community members an opportunity to contribute to student learning in the particularly independent and direct role of teacher assistant, the program expands its commitment to community empowerment. As a general part of the collective effort to impact the growth and empowerment of community children, the Accelerated Learning Program facilitates the effort of a given school to become a *community* school in the truest sense by making ready the community members of tomorrow.

Conclusions

Change is always slow to bring about, but when the need for change is readily apparent, it is always possible. We cannot, and should not, seek to "cure" the differences posed by children with learning difficulties because they are not a disease. However, we have the power to change school demands on students at risk for school failure to make them comfortable and believing that they are able to learn.

The needs of First Nations children who are dismissively labelled as "low achieving," and yet who receive no special assistance at all, are very clear. It is my hope that awareness and understanding of the needs of this population lead to the design and provision of appropriate programming.

CHAPTER 5

QUANTITATIVE ANALYSIS

Introduction

It is the purpose of the quantitative component of this study to compare scores of the *WISC-III* (Verbal Conceptualization [VC] factor) and the *Woodcock-Johnson Psychoeducational Battery-Revised* (Broad Reading [BR], Broad Math [BM], Broad Written Language [BWL], and Broad Knowledge [BK]), so that a distinguishing pattern of ability and achievement performance characteristics can be identified. This would more precisely define the efficacy of complementary features and structures of the Accelerated Learning Program (ALP). Specifically, in the quantitative analysis, two questions are addressed: Is there a substantial change and increase in the ability and achievement profiles of those students who had participated in the ALP, and do these profiles then differ significantly from the control group? What are some possible factors of combinations thereof which may be related to and help explain the differences with respect to the groups?

Results

Tables 1 and 2 present a summary of the pre- and post-test verbal ability and achievement means and standard deviations of the experimental and control groups. The experimental group's pattern of achievement performance on the pre-test was slightly greater than that of the control group. The one notable exception in this pattern was on the measure of Broad Written Language (BWL), where the control group mean was 86.00 compared to the experimental mean of 83.58. The profile of ability on the verbal conceptualization factor also showed some variation between the groups, as evidenced by

Table 1

Means and Standard Deviations of Verbal Conceptualization and
Woodcock-Johnson Subtests for the Control Group

Variable	Mean	Standard deviation
VC		
Pre.	76.66	4.79
Post.	81.08	4.62
BR		
Pre.	76.83	11.28
Post.	81.42	9.76
BM		
Pre.	79.50	11.91
Post.	86.42	12.06
BWL		
Pre.	86.00	8.46
Post.	86.90	10.88
BK		
Pre.	91.80	10.31
Post.	92.00	11.27
Math	44.17	8.67
Writing	16.15	2.80
Reading	16.17	5.81

Legend

VC - Verbal Conceptualization Factor
 BR - Broad Reading
 BM - Broad Math
 BWL - Broad Written Language
 BK - Broad Knowledge

Table 2

**Means and Standard Deviations of Verbal Conceptualization and
Woodcock-Johnson Subtests for the Experimental Group**

Variable	Mean	Standard deviation
VC		
Pre.	79.00	3.91
Post.	95.42	6.99
BR		
Pre.	83.80	4.49
Post.	99.42	7.46
BM		
Pre.	102.83	14.72
Post.	113.75	14.33
BWL		
Pre.	83.58	5.38
Post.	97.25	8.06
BK		
Pre.	100.17	9.52
Post.	103.17	5.42
Math	61.50	8.89
Writing	18.92	2.58
Reading	27.58	5.02

Legend

VC - Verbal Conceptualization Factor
 BR - Broad Reading
 BM - Broad Math
 BWL - Broad Written Language
 BK - Broad Knowledge

the pre-test means of 76.50 for the control and 79.00 for the experimental group. Post-test means for both groups indicated a pattern of performance on the variables of VC, BR, BM, BWL, and BK that was slightly higher than the pre-test means. In comparing the standard deviations of the variables, scores appeared to be more tightly clustered about the means in the experimental group with two exceptions, BM (pre and post-test) and VC (post-test only). In addition, the pre- and post-test standard deviations of the experimental group on the measures of VC, BR, and BWL indicate that scores were more spread out on the post-test. In contrast, the control group showed significantly less variation in the pre- and post-test scores on most variables. One common element in the profile for both groups was on the measure of BM, where the pre- and post-test standard deviations remained somewhat consistent for both.

Overall, the larger difference in means on the pre- and post-tests in favour of the experimental group suggest that the results display some support for the research hypothesis.

An analysis of variance (ANOVA) was used to determine whether the mean differences are greater than would be expected by chance, given the amount of variability that existed in both groups. The assumption underlying the ANOVA procedure is that if the groups to be compared are truly random samples from the same population, then the between-groups mean square should not differ from the within-groups mean square by more than the amount that would be expected from chance alone.

A 2(group) X 2(time) ANOVA with the last factor repeated was carried out. Tables 3 through 7 provide ANOVA results focussing on interaction effects (where $p < 0.05$ for significance). Significant interaction effects were present for Broad Reading

($p = 0.001$), Broad Written Language ($p < 0.001$), and the Verbal Comprehension Factor ($p < 0.001$). There were no significant interaction effects on the dependent variables of Broad Math ($p = 0.381$) and Broad Knowledge ($p = 0.288$). This was not an unexpected outcome given that the focus of the Accelerated Learning Program is essentially on the development of reading, comprehension, and writing fluency.

Table 3

Dependent Variable Broad R

Variable	Sum of squares	df	F	P
Broad R	1220.083	1	52.537	<0.001
Interaction	363.000	1	15.63	0.001
Error	510.917	22		

Table 4

Dependent Variable VC

Variable	Sum of squares	df	F	P
VC	1302.083	1	165.663	<0.001
Interaction	432.000	1	54.963	<0.001
Error	179.917	22		

Table 5

Dependent Variable Broad M

Variable	Sum of squares	df	F	P
Broad M	954.030	1	15.866	0.001
Interaction	48.000	1	0.798	0.381
Error	1322.917	22		

Table 6

Dependent Variable Broad WL

Variable	Sum of squares	df	F	P
Broad WL	638.021	1	22.806	<0.001
Interaction	487.687	1	17.509	<0.001
Error	612.792	22		

Table 7

Dependent Variable BK

Variable	Sum of squares	df	F	P
BK	30.083	1	1.478	0.237
Interaction	24.083	1	1.183	0.288
Error	447.833	22		

The significance of the F-ratio indicates that the differences found between these groups after treatment cannot be attributed to mere chance. From the significance of the F-ratios in Broad Reading, Verbal Comprehension, and Broad Written Language, it can be inferred that the difference between the performance of those students who had been exposed to the ALP and those who were not exposed is beyond chance expectation. This can be attributed to the experimental treatment and to the inference that the ALP increased the performance of students on individual ability tests (Verbal Comprehension-WISC-III), as well as individual and group achievement tests (Woodcock-Johnson Psychoeducational Battery-Revised, Provincial Achievement Tests).

Figures 1A, 1B, and 1C depict a visual graphline of the pre- and post-test mean scores for the groups of students in the study. In Figure 1A, BR (Broad Reading), and 1C,

VC (Verbal Conceptualization), both groups show an increase on the pre- and post-test mean scores. However, the achievement curve is more gradual within the control group than in the experimental group. In Figure 1B, Broad Written Language (BWL), the control group displayed marginal improvement, and the experimental group was characterised by a much larger increase in pre- and post-test means.

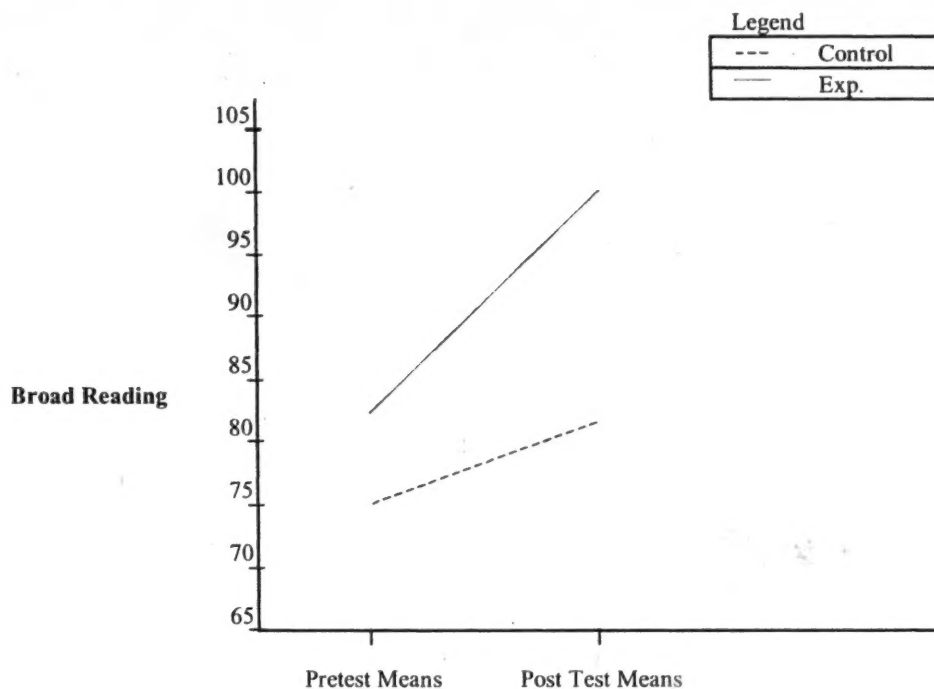


Fig. 1A. Broad Reading Pre- & Post- Test Means

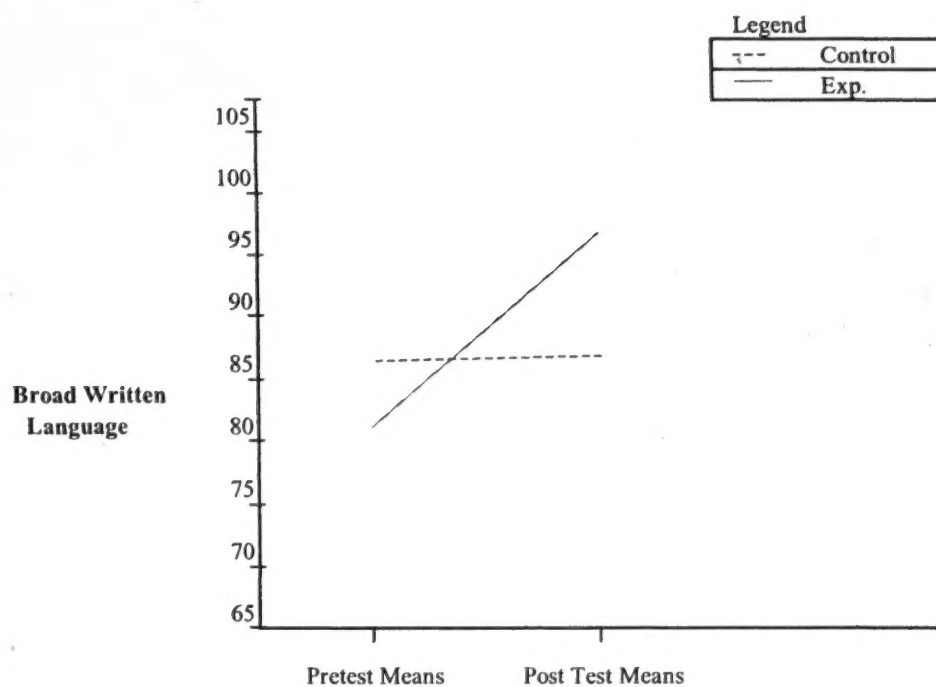


Figure 1B. Broad Written Language Pre- & Post-Test Means.

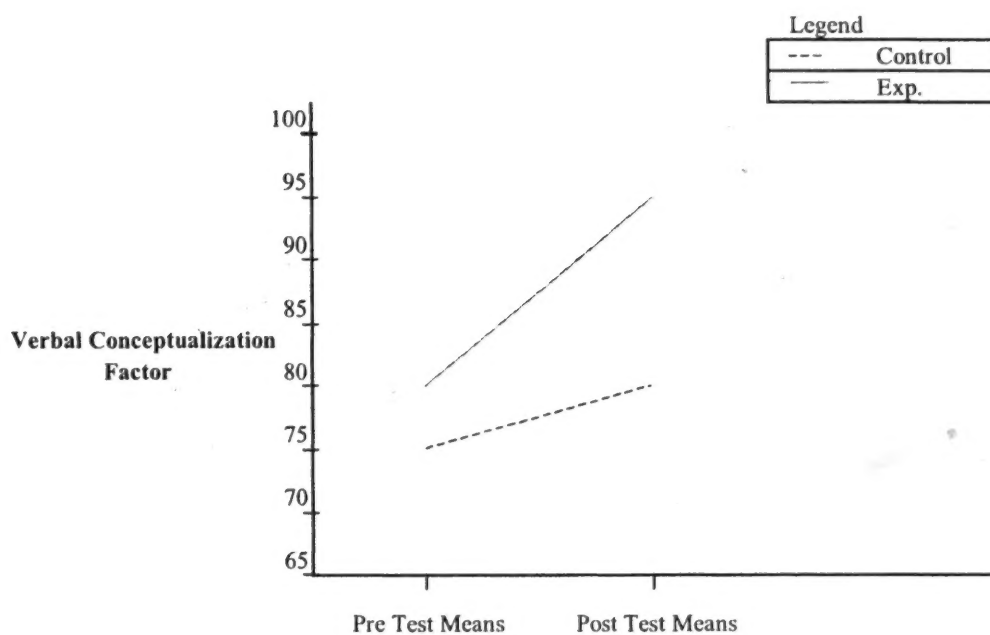


Figure 1C. Verbal Comprehension Factor Pre- & Post-Test Means.

To further examine the differences among the groups, the results on the reading, writing, and math subtests of the Alberta Provincial Achievement tests were analysed using t-tests. Table 8 indicates that the groups did differ significantly on reading and somewhat less significantly on writing. There was a significant difference obtained for math, as illustrated in Table 9, which was to be expected. These findings increase the confidence that the differences observed between the two groups were not simply a result of chance and lends support and credibility to the previous analysis of results.

Table 8

Dependent Variable Writing and Reading: t-test

Variable	T	df	P
Writing	-1.973	22.000	0.061
Reading	-5.150	22.000	<0.001

Table 9

Dependent Variable Math: t-test

Variable	T	df	p
Math	4.832	22.000	<0.001

Although the results of the t-tests and their associated significance levels are helpful for most researchers, they communicate little to average parents and teachers. Furthermore, the fact that a given difference between two means is statistically significant does not necessarily guarantee that the difference is meaningful in any practical way. It is only through systematic observation of the variability between the two

groups relative to the degree to which the scores differ within each group that one may answer the question as to the ALP's effectiveness in raising student ability and achievement.

To further explore the differences on the measures, Alberta Provincial Achievement test results spanning a five-year period are depicted in Tables 10 and 11. The experimental group in the academic year 2000-2001 achieved a total test acceptable percentage of 80.4, whereas that of the control group was 21.7%. Another interesting trend in the five-year summary is a significant increase in group achievement beginning in the academic year 1998-1999 (first year of ALP implementation; 65.0%), 1999-2000 (76.5%), and 2000-2001 (80.4%), compared to the lack of achievement improvement in the control group as evidenced by the scores in 1998-1999 (23.3%), 1999-2000 (30.6%), and 2000-2001 (21.7%).

Summary

Small-sample studies are often found wanting because the differences obtained often lack statistical significance. In this study a design was chosen that was strong in both internal and external validity. However, in striving for one type of validity, other types of validity are threatened. For instance, in striving for more rigorous control in the educational setting, there was always the fear and likelihood that the artificiality may increase and threaten the applicability of the findings to an actual classroom and school setting. In essence, what was realised was a compromise between internal and external validity by choosing a design that provided sufficient control to make results interpretable, while preserving some realism, so that findings in this study could be generalized to other First Nation community schools.

Table 10

Five-Year Summary of Grade 3 Provincial Achievement Results for the Control Group:English Language Arts

Control group	School year									
	1996-1997		1997-1998		1998-1999		1999-2000		2000-2001	
	Sch	Prov	Sch	Prov	Sch	Prov	Sch	Prov	Sch	Prov
Number writing	26	40384	31	40893	30	41290	36	40428	23	40170
% absent	0.0	3.1	16.2	3.7	13.5	2.7	2.7	3.2	31.4	3.8
% excused	13.3	2.8	0.0	3.0	5.4	3.2	0.0	3.8	2.9	3.6
Total test										
% acceptable	19.2-	82.7+	25.8-	86.0+	23.3-	88.7+	30.6-	90.7+	21.7-	89.4+
% excellent	3.8=	13.6-	0.0-	15.2=	0.0-	15.8+	0.0-	19.3+	0.0-	17.4+
Part A: Writing										
% acceptable	34.6-	82.2-	19.4-	83.0-	40.0-	87.3+	44.4-	91.4+	34.8-	89.7+
% excellent	0.0-	11.1-	0.0-	14.0-	0.0-	12.3-	0.0-	20.2+	4.3=	18.4+
Part B: Reading										
% acceptable	15.4-	87.6+	45.2-	86.0+	23.3-	87.6+	36.1-	88.9+	30.4-	87.8+
% excellent	3.8=	33.2+	0.0-	31.5+	3.3=	36.1+	2.8-	35.7+	0.0-	33.1+
Total test mean (%)	41.2	68.1	42.9	66.8	41.9	68.5	47.3	71.4	43.7	70.0
Total test SD (%)	13.7	14.0	11.5	14.6	14.5	13.4	13.3	14.1	8.8	14.6

Table 11

Five-Year Summary of Grade 3 Provincial Achievement Results for the Experimental Group: English Language Arts

Experimental group	School year									
	1996-1997		1997-1998		1998-1999		1999-2000		2000-2001	
	Sch	Prov	Sch	Prov	Sch	Prov	Sch	Prov	Sch	Prov
Number writing	12	40384	15	40892	17	41290	17	40428	12	40170
% absent	20.0	3.1	21.1	3.7	0.0	3.2	15.0	3.2	7.0	3.8
% excused	0.0	2.8	0.0	3.0	0.0	3.2	0.0	3.8	0.0	3.6
Total test										
% acceptable	0.0	87.2+	20.0-	86.0+	65.0	88.7+	76.5	90.7	80.4	89.4
% excellent	0.0	13.6	6.7	15.2	0.0	15.8+	0.0	19.3	20.0	17.4
Part A: Writing										
% acceptable	8.3-	82.2	26.7-	83.0	70.0	87.3	70.6=	91.4	76.0	89.7
% excellent	0.0=	11.1	0.0=	14.0	0.0	12.3	0.0=	20.2	0.0	18.4
Part B: Reading										
% acceptable	0.0-	87.6	13.3-	86.0	60.0	87.6	76.5=	88.9	84=	87.8
% excellent	0.0=	33.2	6.7=	31.5	0.0	36.1	0.0=	35.7	16=	33.1
Total test mean (%)	31.3	68.1	38.9	66.8	52.0	68.5	57.8	71.4	70.0	70.0
Total test SD (%)	10.2	14.0	16.6	14.6	N/A	13.4	8.5	14.1	9.5	14.6

In spite of smaller sample sizes for both research groups, three of the five dependant variables (Verbal Conceptualization, Broad Reading, and Broad Written Language) showed differences between pre- and post-treatment that was statistically significant. The results presented above suggest with some clarity that the interventions provided through the Accelerated Learning Program were successful in improving reading and writing skills as measured by the Woodcock-Johnson Psychoeducational Battery-Revised. The results on this measure were validated by the experimental group's

performance on the Alberta Provincial Achievement Test, suggesting that a functional relationship existed between the Accelerated Learning Program and the dependant variables of VC, BR and BWL. To further investigate the general effects of the intervention, a qualitative analysis including interviews with all the stakeholders and observations of the participants in the ALP was carried out. The following section presents the results of this analysis.

5

CHAPTER 6

QUALITATIVE DISCUSSION

The results to follow are based on qualitative research conducted at the first research site during the period of January to April 2000. The discussion reflects the ALP program as it existed during this period, despite changes that the program has undergone since that time. The section recounts the subjective views of community stakeholders of the successes and frustrations in the attempt to meet program goals. The discussion is divided into three sections to reflect the levels of the community's experience with the program: first, success within the ALP room itself; second, the Accelerated Learning Program within the school community in general; finally, the program and school in the context of the project of community development.

The report is based only upon research that was conducted following the initial research design and revisions made during the research session, as reviewed and accepted by the school board in question.

Summary

The following discussion addresses five major statements:

1. The degree to which the Accelerated Learning Program is able to meet the objective of enhancing levels of achievement will vary with the degree to which there is collaboration among all individuals who have a role to play in the growth and personal development of these students: teachers, teacher aides, administrative personnel from the school, to school board levels, counsellors and support staff, and parents.
2. The degree to which the Accelerated Learning Program is able to meet its basic objective of enhancing levels of achievement will vary with the degree to which there is

consistency within the program, between the program and homeroom classes, and between classrooms.

3. Student success in the Accelerated Learning Program is informed by all aspects that comprise the self (intellect, affect, social, physical, spiritual) and factors that inform the quality of students' lives in all domains (the family and home, the peer circle, the school, the community). Therefore, the ability of the program to meet its goals will increase when the "whole child" is taken into account.

4. Because the school is a system, the ability of the Accelerated Learning Program to address the growth of the whole child will be enhanced or hindered by the degree to which the school as a whole is able to meet this goal.

5. For any First Nation, locally controlled schools can be an important tool in the process of community building. This needs to be acknowledged in the context of long-term planning for the school.

Within the ALP Room

How effective has the Accelerated Learning Program been in addressing the challenge special needs and achievement at this school?

This section examines the overt successes and/or failures of the program to meet its most fundamental goals: enhancing student achievement and the empowerment of the whole child. Findings will be framed in terms of student success in the ALP setting and in terms of their ability to generalize their success to the classroom and home (where applicable) domains. Factors that inform students' ability to perform in school will be drawn out as the discussion unfolds, to be subsequently examined in depth.

Academic Achievement

Provincial achievement results showed significant improvement in the 1998-1999 achievement year for Grade 3. This general trend was also reflected in individual achievement scores, especially in the language arts subjects, reflecting broad reading, comprehension, and written language. Comparison of ability profiles on the verbal subtests of the WISC-III indicates significant improvement in subtests that compare the verbal comprehension factor. The results in the 1999-2000 year reflected a similar trend prevalent in the analysis of 1998-1999 data; however, the margin of improvement upon the 1998-1999 year was significantly lower than that from the 1997-1998 to 1998-1999 academic years.

Teacher and parent participants indicated that the Accelerated Learning Program has been, from their point of view, generally successful in meeting the goal of enhancing the academic performance of students in their problem areas.

For the most part, teachers recognized that those of their students who had attended ALP had made improvement in their respective "trouble areas." Although most comments were supportive, they were also vague. Only in two cases did teachers comment that they had noted students applying new skills or techniques to work assigned in the homeroom class. One teacher commented that although she could see general improvement, she could not see that the students were able to effectively transfer what they were learning in ALP, to the degree suggested by the ALP coordinator. "They're reading better, . . . but I find that a lot of the time that [the ALP coordinator] tells me one thing, and then [my students] come here and I have the same expectations of them, and they look at me like I've got two heads." Another teacher commented that she had

noticed no improvement among her ALP students, beyond an enhancement of basic social skills.

Many parents had only a rudimentary knowledge of the Accelerated Learning Program, its purpose, and the reason for which their child was involved. Although the majority of parents involved in the study had a basic idea of where their child's academic "problem areas" lay, in general their knowledge rarely extended beyond being able to name the subject area. On the other hand, those parents who identified themselves as being actively involved in their children's education often commented that they seemed more confident when it came to their problem area (e.g., letter recognition, reading, writing, math), after having participated in the program for a significant period:

When [students] do get frustrated, for my two kids anyway, they have more one-on-one with the teacher [in ALP], and it helps them to calm down and focus. I know, [my son] especially, it's helped him. He's more likely now to try and help out with the school, rather than to try and be destructive. . . . His math has picked up a little; his reading is still a little slow for his age group.

Parental views of ALP were often based on conversations that they had had with their children's teacher, comments made on report cards, and/or an awareness of prizes or awards their children had received related to accomplishment in their problem area. In a few cases, these opinions were based upon witnessing their child's ability and willingness to tackle homework in areas they had previously approached with anxiety. However, it should also be noted that the ALP coordinator has made a concerted effort to publicize the program since its introduction and that home visits are regularly made to apprise parents of any referral made for their child to attend.

Learning Styles

The program offers instruction individually tailored to students with a variety of dominant learning modalities, a feature of the program that not only constitutes a "best practice" in cognitive education (Ashman & Conway, 1997), but is also in line with the dominant, if controversial, discourse concerning the culturally based learning styles of Native students (Browne, 1990; cf. Chrisjohn & Peters, 1986).

Due to high enrolment figures during the 1999-2000 school year and to erratic attendance patterns, the number of students assigned to each given instructor varied from one to as many as six. At the time of the study, the ALP coordinators acknowledged that they had experienced considerable difficulty in securing regular attendance among ALP teacher assistants, as well as among certain students. The result of this situation was that on any given day the coordinators did not know who would be present to teach students. On those days when even a couple of TAs were absent, group sizes for the instructors present could increase to six or seven students. On those days, programming consistency and the ability of instructors to deliver relatively individualized instruction to students was compromised.

The philosophy of the Accelerated Learning Program was readily detectable during observation periods. Students were given direction, feedback, and encouragement from the beginning to the end of their attempts at each task. Several teacher assistants also attempted to model the new tasks they placed in front of each student. The TA would perform a couple of items at the beginning of the assignment (by providing sample sentences to start a writing assignment, for example), and then would coach the student as she or he attempted to emulate the example. The practice appeared effective from the

standpoint of providing the student with a catalyst and model, but also by appealing to both visual and kinesthetic learning modalities. Nonetheless, this point illustrates less the value of teaching towards a very specific learning style that may or may not be associated with a typical pattern of learning attributed to Native students than it does to teaching in a manner that is responsive to the particular way that individual students learn.

Motivation, Self-Concept, and Personal Growth

The degree to which students progressed in the area of motivation and self-concept in the learning context was to a large extent determined by the child's personality, level of maturity, and, in many cases, home environment. Student programs were assembled to allow students to experience regular success in the ALP room. The classroom itself and the management style of ALP instructors (e.g., the independence expected of students, the student-centred routine of each ALP period, elaborate incentive programs) provided further motivational stimuli to students who attended regularly. Observation periods in the ALP room revealed that the majority of students were responsive to these stimuli; however, in many cases the work ethic and confidence that were apparent in the ALP room did not transfer to either students' overall self-concept or behaviour in the general education classroom.

In certain cases (especially among the primary grades), teachers noted an improvement in their students' eagerness to tackle tasks in their problem areas and a renewed ability to focus. When one teacher was asked how participation in the program had affected the academic performance of her students, she responded that she had noticed the most change in her students' self-esteem:

I had a boy who I got at the beginning of the year who could sound out the letters of the alphabet but could not put them together if his life depended on it. Today he read a book to me, and he was just, "I'm reading!" And I was like, "I know!" That's why I became a teacher. And it's just, the look on his face.

Teachers commented on a newly developed sense of satisfaction and pride among students who attended ALP, a direct result of the perception that they could finally cope with the tasks in their trouble areas. In several of these cases, however, this self-esteem was precarious and easily disrupted when students performed poorly on a given task or when they were subject to negative peer pressure.

In quite a few more cases, however, teachers noted an improvement in students' academic performance without any associated change, for example, in the disruptive behaviour or self-esteem issues that they exhibited in class. In a couple of these cases, teachers were able to point to factors in students' personal or home lives that perhaps were at the root of their negative behaviour and attitudes.

In general, motivation and self-esteem were areas of particular concern to teachers and were areas in which they were particularly involved in addressing in their own classrooms. Although they recognized that ALP was working to build a sense of self-confidence and ability in the learning context, however, both teachers and ALP staff were reluctant to attribute any solid improvement in this area to the program itself, pointing out that only so much can be done to build a child's self-concept and work ethic with a program that lasts only one period in the day.

Profiles for individual students provided a clear indication that the array of factors shaping their progress in this area of development is overwhelmingly varied and complex. Interviews with teachers and ALP personnel revealed their frustration over the

fact that the school is equipped to effectively address only a small number of these factors at this point in time. As one teacher commented:

There's a lot of garbage going on out there. My approach is that when [the students] walk through that door, you're grateful that they're walking in at all. I cannot worry about what's going on out there. . . . You have to block it out.

The success at school cannot be divorced from the quality of their life outside the school walls, and the ability of students to become actively engaged as learners and to excel at school has for many in this population been deterred by extrinsic factors that place them "at risk" for school failure. The following were taken from responses to a final question posed to teachers, asking whether "there is any factor that can be considered dominant in shaping [a given] student's life at this point in time":

He is willing to learn. When his parents are having problems he is usually in another home trying to get himself to school. He makes an effort to get to school. Tiredness may hold him back.

She lacks self-esteem: "I can't read." Lacks self-motivation. . . . She has a very unstable home life. Some days [she] does not know where to go after school. Is it to Mom's? Is it to Grandma's? . . . [She] has an okay level of self-esteem in her work, but lacks self-esteem in her relationships and friends. Her attendance is a problem; I don't think education is valued too much at home.

He lacks self-esteem to do his best! But he is proud of himself when he achieves. [His lack of motivation leads to problems with] behaviour control and attitude. He has very "low standards" of himself. It doesn't bother him to do poorly. Mistakes are not a learning experience because he gets upset and will "shut down" and not fix up mistakes. Failure is not a motivator for him to do well at all. Lately, he sleeps through math class.

There were several dramatic cases in which a student's performance plummeted at a particular point in the school year, coinciding with a personal crisis well known to school staff. However, the school more often remains oblivious to the causes of these crises, when teachers are able to comment only vaguely about some type of "instability" that a

given child is experiencing at home: "Since Christmas, [he's had] poor attendance; therefore [there] must be something significant [going on]." In several cases, teachers made it clear that students' progress was in fact hampered by the fact they had no one to whom they could talk and who could guide them through these issues:

He is afraid of being perceived as being successful and tends to destroy his work. . . . [He] has a problem when dealing with structure and discipline in situations where he feels inadequate to dealing with them. [He] needs daily, consistent counselling to help him cope with his problems. When [he] is counselled, he settles down and becomes a contributing, co-operative student.

In light of the close relationship that often develops between students and their ALP instructors, ALP personnel often act as de facto counsellors, helping students through varied periods of hardship from when they are merely having a bad day to when they are working through a particularly difficult time in their life in general:

The program has a lot to offer. Like I said, the one-on-one, the counselling. I'm sure a lot of people don't realize we have to do that too. It's not only just [academic] work. And you know, the relationship you build with the kids. It's not just being a teacher.

Students (particularly from division II) were able to identify and articulate the emotional support that they received in ALP. Even when some student participants were having a bad day, they knew that their instructors would help them deal with their problem, whether by letting them take some quiet time or by talking them through the issue in a quiet part of the playground. For these students this type of support has come to be part of what they expect from that period of the day, and the ALP room has become a place of safety and comfort. Given their age, the very matter-of-fact attitude with which these students described this relationship to the researcher was highly indicative of the degree of comfort they receive there. However, given the degree of severity of the issues that

students often face in this setting and the lack of training the TAs have had in this role, the school should not depend on the program to fulfill this role to such a degree.

In some cases homeroom teachers could also identify the strategies that they used to help students learn to cope with difficult issues facing them, including: personal, one-on-one attention; talking circles and targeted writing exercises; role playing; group direction in conflict management; and home visits. Many of the students in the program also met with the itinerant social worker or counsellor once a week. Nonetheless, the acute need for full-time counselling services at the school was easy to identify as the research progressed.

Attitude Towards Learning

All teachers interpreted the very fact that their students enjoyed going to the program, knowing the high expectations that would be placed on them there, as a sign of their growing positive attitude towards learning. In several cases (especially among Grades 2 to 4), teachers indicated that this attitude had filtered into students' attitudes towards learning tasks in their homeroom as well: "They enjoy going. It's not seen as going because you're slow or because you don't understand. Kids that do have a problem, do have trouble with a concept, will come up to me and say, 'I don't understand. Can I go to ALP?'"

In interview, students overwhelmingly confirmed that they liked working in ALP "because it's fun." They generally liked their instructors, but provided no indication during the interview that they felt any closer to them personally than they did towards their homeroom teachers, despite the individualized nature of the work arrangement in

ALP. However, observation periods revealed that the students were in fact quite engaged on a personal level with their instructor even while working.

Very few students were able to make a connection between their day-to-day success in ALP and the extent to which they were 'good students' in general. During interview, at least one long, drawn-out conversation would take place that centred on a particular recent work event at which the student had experienced success (e.g., a worksheet, test, game, writing assignment, etc.). However, most students were unable to verbally cite the process that led to their accomplishment. Students were extremely reluctant to attribute their success in ALP to their own effort or ability. Most often they would say that they were simply doing what they had been told to do. "*What makes you a good student?*" "Being good, and don't be bad. Don't swear, and don't tease your friends. Be nice. Be nice to your teacher, and your teacher will be nice to you." In a couple of rare cases, however, students indicated that they succeeded due to their own ability, and they were able to walk the interviewer through the process they had followed. Whether the confidence exhibited by these students preceded or was a product of their accomplishments in this setting is debatable.

Work Habits

There was little consistent change in students' work habits reported by homeroom teachers. Teachers commented that students continued to need pressure and assistance before getting to work on their own. Echoing similar comments from other teachers, one division I teacher suggested, "They're not pushed to be independent learners. These [children] are not self-starters."

However, this image contrasts greatly with what the researcher observed in the ALP room itself. Students were well accustomed to the routine set-out by their instructors and were able to make transitions from one task to the next quickly and independently. Although increased productivity is obviously one of the products of the individualized attention that they received in ALP, few students exhibited any excessive dependence on their instructors. For the most part, students worked quietly and independently, turning to request help only on occasion. The comprehensive and predictable structure and pace of the program functions to enforce this behaviour. The Accelerated Learning Program is perfectly integrated into the school day, and students are well versed in what to expect during that period. Students are held to a high standard related to productivity, effort, and the quality of their work. Students are also aware of what they are working towards in each period, whether it is computer time, down time, a story, or a chance to draw something for their TA.

Student comments indicated the degree to which they felt comfortable with the immediate assistance and support that were available to them in the learning setting. The fact that help was immediately available whenever they needed it contributed to the degree of control that students possessed over the pace of their work and the degree to which they exhibited ownership over the learning process in general. Students understood that the positive feedback and incentives they received for working hard, the pride that their instructor (and in a few cases, they themselves) felt for work well done, and the amount of time they would have for "free time" (using educational computer programs, drawing, or free reading time) were all factors of their day that were in their control.

Social Development

Despite the fact that students received instruction in small groups, there was not as much emphasis placed on peer learning or group work. The degree to which participation in the program contributed to the "social development" of students remained, in fact, the product of the relationship that students built with their instructors, as described earlier. Unlike the experience of students involved in the Eagle programs (the multiage grouping program), there was not much of a chance for students to develop a group identity as "ALP students." Once again, expectations of what the program could accomplish in this sense must be put into proper context, given the limited time that students spend in ALP each day.

In general, there was little stigma attached to attending the ALP program for students in divisions I and II. The mystique around the program and the reputation that it had for being fun precluded this problem amongst younger students. Students in the junior high program, however, appeared somewhat more embarrassed about their participation in the program.

Finally, the inability of the Accelerated Learning Program to address behaviour problems was a point of bitterness brought up by the majority of teachers and, more significant, by several members of the ALP room staff. The mandate, lack of time and resources, and lack of specialized training has made it impossible for the program to adequately address special needs beyond those related to academics. As discussed earlier with respect to emotional needs, this also reflects the fact that the school as a system was poorly equipped to meet the needs of the "whole child" beyond those traditionally associated with the school domain (e.g., intellectual growth).

Conclusions

The program has experienced moderate success in meeting its fundamental goals. Academic achievement has been enhanced amongst those students who have attended the program on a regular basis. However, students for the most part have been unable to generalize the skills and strategies they have learned in ALP to the context of their homeroom programs. With the lack of consistency between the programs delivered in the ALP and homeroom settings, it is all too easy for students to treat the skills they learn in ALP as applicable only to tasks assigned in that setting.

The force of a low self-concept on the ability of low-achieving students to become actively engaged in the learning tasks before them is often crippling. The empowerment of low-achieving students is often mirrored in their ability to become actively engaged in learning tasks and to exhibit independent, self-regulated behaviour. Students have tended to respond well to the structure and expectations placed upon them and are in fact beginning to exhibit independence and a sense of ownership over the learning process. Students initially seemed to engage in the tasks they found in ALP because they believed the work there to be "fun." As experience with the program grows, however, the work ethic that students developed can also be seen to emerge from the regular experiences of success they have in ALP (i.e., so that they realize that they can succeed in their problem area), the fact that there is a constant and trusted source support available, and a program structure that encourages them to take a chance.

However, in most cases students have yet to reach the point where they are able to attribute the successes they experience to their own ability, a transition that would signal

an improvement in their self-concept as learners. In many cases the reach of the success that they experience is still limited beyond the confines of the ALP room.

Recommendations

Although staff in both the homeroom and ALP settings are responsible for creating and delivering appropriate programming for each student, there is no need to reinvent the wheel in each setting. It is important to remember that each child cannot be dealt with in fragments. A situation in which a student's needs in programming, instruction, or classroom management are dealt with differently in every setting will be confusing for the child, and ultimately self-defeating for the staff involved.

As much as possible, staff should work towards coordinating their efforts. Before such collaboration can occur, more liaison work needs to be done to make general education teachers more fluent with the goals and structure of the program. Further, both the general and special education programs need to make the effort to establish relationships with parents so that they come to have a more substantial understanding of their children's strengths, weaknesses, and progress. The collective effort necessitated by the creation and implementation of individual program plans (IPPs) may be an ideal tool in the attempt to create these dynamics.

The goal of meeting individual needs would also be better met with the extension of certain elements of ALP programming into the homeroom setting and perhaps vice versa. The goal of bringing about the generalization of learning strategies and skills can be approached through the coordination of language arts and math programming in the two settings and by encouraging students to apply given strategies to tasks assigned in either setting.

Within the School System

As a model, one of the strengths of the Accelerated Learning Program is that it can be moulded to fit the needs and resources of each institution of which it becomes a part, while at the same time providing a thread of continuity by maintaining basic goals, structural elements, and a core of key staff members. In some respects it becomes an entirely unique program each year, while maintaining a very basic vision of its mandate.

Nonetheless, the program is a part of a school system, and, as such, the program is also shaped by the strengths and weaknesses of the system of which it is a part. It became clear during the research session that problems endemic to the way that the school deals with special needs as a system have, in fact, hindered the ability of the program to meet its basic objectives in several ways.

Becoming an Inclusive School

In order to meet many of its objectives, the program must be integrated into the way the school runs as a whole. Similarly, ownership of a school vision for how special needs are to be met are best adopted by the school as a whole, rather than made the responsibility of a segregated minority. If it is to reach its potential, the Accelerated Learning Program cannot be left as a separate department, the concerns of which are beyond the domain of the general education classroom.

In fact, in many ways the program was isolated from the rest of the school. Teachers and parents often used the interview time to ask questions about the way the program runs and at times even seemed unfamiliar with its basic goals. Teaching staff tended to view ALP as completely separate to their programs and seemed largely unaware of what was being taught to their students during ALP class. Despite the fact

that the ALP coordinator was very active in providing in-class support when requested, teachers were not aware that they could also have input into the ALP program itself (for example by providing direction on the skills and content to be addressed).

Given that ALP lasts for only a single period each day, the question of how each student's individual needs are being met throughout the rest of the school day warrants further study. All teachers were able to articulate the approach they used in class to accommodate the special needs of their students, strategies that included modifications to the curriculum or workload; the use of ability grouping; individualized attention, as time allowed; additional help during recess or after school; and special considerations in light of certain behaviour problems. In very few cases had teachers incorporated the regular use of IPPs into their programs, mostly citing time constraints, an unfamiliarity with the process and format, and the generally unwieldy nature of the computer program in question.

Although all teachers cited some attempt to address special needs, however, most seemed to have a limited understanding of the role they needed to play in this respect. Many participants declared themselves unsure about what their responsibilities were towards students with special needs once they had returned from the ALP room and, furthermore, seemed uneasy with the extent and complexity of special needs in their classroom:

It blows my mind that I'm teaching the alphabet in [such an advanced grade]. Nowhere in the curriculum does it say that I have to teach the alphabets to students in [this grade]. . . . The level of these students is really going down, and I don't know if it's the teachers, curriculum, students? And it really upsets me, when you have kids who can't read [at this level].

A couple of teachers tended to view the program as a release from dealing with students whose needs were beyond what they felt they could handle in their classrooms, leaving them free to deal with "normal" students for that period. As one teacher assistant in ALP commented, "I don't think the teachers really care what we're doing in here, like, as long as they got rid of the child."

Further, several participants intimated that any emotional or behavioural issues stemming from stress in a student's personal life were well beyond the scope of what teachers should be expected to address. This attitude seemed to be the result of a lack of preparation for the role of teachers implied by this setting (i.e., a band-run community school), but also from a feeling that teachers had been left on their own without support for dealing with special needs. It should be noted that this attitude applied to members of the teaching staff to varying degrees.

A New Role for Teachers

Several characteristics of the school system make it ill equipped for any inclusive, schoolwide approach to accommodating special needs. The high rate of turnover in teaching staff from year to year means that it becomes necessary to sell ownership of the program to a new staff, with varying experiences with special needs year after year. It can only be expected that teachers will do what they can to cope with special needs in their classroom according to their experience—experience that is valuable, but inconsistent from one staff member to the next, and often limited in scope—until they are given reason to do more through respectful encouragement, direction, and support. The flexible and evolving nature of the program—in a sense, one of its key strengths, given the inconsistency in staffing—actually seems to make some people uncomfortable due to the

fact that the roles and responsibilities of each component of the school staff and departments tend not to be well defined.

When joining a new school, teachers need to understand the vision of "inclusion" of that particular school, what role they are expected to play in this effort, and how important the endeavour is within the trajectory of a developing system of community education. Without the benefit of having participated in the process of creating and implementing the Accelerated Learning Program, incoming staff will need a practical, ongoing, and reflective introduction not just to the intervention, but also to the way that the school and community expects the special needs of its students to be handled.

The need for collaboration between teaching staff in homeroom and ALP settings and between the school and community in general was reflected in many systemic problems that appeared to spring from poor communication and a lack of mutual understanding. As implied above, the general lack of communication in the school contributed to problems in the program itself: from a general lack of appreciation for the role each member of the school community needed to fulfill with respect to special needs, to day-to-day miscommunications that often resulted in quick changes of plans and bad feelings, and not always to the benefit of the children involved. However, there seemed to be no impetus to pursue better communication or collaborative relationships in the school due to a lack of leadership and, in many ways, a generally unhealthy work environment. The school principal commented that, despite current trends, he did not feel that collaboration is an important facet of school management; this attitude made sense given his general approach to school leadership. Further, by the time the research session had begun in late January, the school personnel had broken into a variety of factions; and

though the need for collaboration was generally recognized by individuals in interview, the atmosphere and will to see it brought into being were simply not there.

Finally, although most community members agreed that many of the challenges faced in education could be diffused were there to be community members or at least Native people making up the teaching staff, there seemed to be little thought given to preparing incoming non-Native teachers in the meantime for the role they should expect to play over their tenure in the community. The majority of teachers expressed some degree of isolation and tension when describing their experience of living in the community, most of which should be understood as an expression of culture shock and role disorientation.

Instead, what seemed to have happened is that teachers—often recent graduates with little concept of their life and job beyond what they had witnessed at university and the urban public school system—were left to find their way until they encountered what can be called “the awakening.” After uttering such sentiments as, “This school doesn’t run the way the school did where I did my practicum [or my last placement]. What’s going on?” or “These kids are all special needs,” teachers would fall back on the role of the “teacher” with which they were most familiar—that of a teacher in an urban public school. In interview, this sentiment was often articulated in statements of disbelief at how low the achievement levels of most students were or at the poor rate of retention of previously covered material. In several cases in which teachers believed that they could not meet the demands of this inappropriate professional self-image, they would sometimes lose faith in their ability as teachers. However, they more often reverted to blaming the community, students, and parents.

As discussed by Deyhle and Swisher (1997), this attitude stems in part from a "deficit" perspective of Native students that uses the performance of non-Native students in southern urban centres as the basis of comparison and which normally leads to a situation in which teachers tend to locate the "source of the problem" with Native students and parents. However, once again, the extent to which this attitude was present in the school reflected an environment characterized by poor communication and a lack of understanding, in this case between the school and community.

Finally, although individual experiences of the process varied, the social results of this de-acclimatization were very similar. Teachers would disengage themselves from the community, retreating to a social circle of non-Natives who acted as a buffer. The effect on their relationship with their students in some cases was very negative.

A New Role of Teacher Assistants

One of the elements of the program that can be seen as particularly conducive to the goals of community development in/through education is the use of members of the community as a core of teacher assistants: "I think it allows the TAs to feel worthwhile. It gives them a different role, and I think that the students respect them for that different role."

In most cases, teacher assistants in the Accelerated Learning Program were also community members who have had extensive experience as educators in the community. Nonetheless, several homeroom teachers, the ALP coordinators, and the TAs themselves were adamant in stating that, given the demands of the program and the complex needs of the students with whom they were working, the teacher assistants need more training.

There were gaps in the knowledge of teacher assistants that made them uncomfortable in the program, even, for some people, after a year's experience in the setting. The ALP coordinator regularly provided background on the basic skills needed to fulfill the TA position at meetings and in-services (for example, in answer to questions about planning, assessment, and meeting specific needs), but the limited time to devote to such meetings meant that only so much could be covered. There were a few incidents noted in interview and observation in which the skills being taught to ALP students were simply taught incorrectly. Furthermore, as the staff of the program had apparently been promised additional training, the topic was a source of bitterness and frustration.

As noted earlier, poor staff attendance has made it difficult to meet the goal of providing consistency to ALP students. Due to a lack of support staff in general, the needs of the program were often sacrificed to cover staffing deficits in other parts of the school. Both factors resulted in weekly situations in which student groups would have to be combined to the point that "individualized" instruction was no longer possible.

Nonetheless, the role of the TA in this program is undoubtedly one of its strongest characteristics, and one of the most exciting to watch. The teacher assistants described at length the degree of personal engagement they have in the lives of these students they teach, and they proudly recounted stories of some of the successes they have shared with students in the program. The approach of the program coordinator for divisions I and II to managing the team enhanced their development as instructors, her demeanour with them being frank, directing, sometimes corrective, but always engaging. She encouraged them to follow their instincts and common sense and to take the initiative in planning, while being supportive when it came to both personal and professional matters. During their

time with the program, TAs generally demonstrated the length to which they had taken a very personal approach to their role as teachers and spoke of student progress and accomplishment as though they were those of their own children.

Although the TA participants agreed that they enjoyed being more than "another face" in a child's life at school, however, they also spoke of the challenge of remaining with the program while it faced the constraints and pressures mentioned above. As described earlier, the role of the TA is a demanding one, because it draws on the experience of these women not only as community members, but as educators in their own right (even without the benefit of formal training), and also as mothers with children (and sometimes grandchildren) of their own. Their intrinsic knowledge of how children develop and how best to enhance that process through the cyclical use of guidance and patience was readily identifiable in observation. Further, I would argue that the benefit of having community women acting in the position of teachers, while setting up unique relationships with students (particularly these students, deemed "at risk") that nonetheless emanates from locally embedded, culturally viable norms (i.e., familial relations within the extended family, socialization norms) cannot be understated, even though the ways that these norms manifest in the classroom may be hard to detect from the outsiders' point of view. This may be another area of future exploration.

To summarize, similar to the needs of incoming teachers, the school needs to invest in the program and in teacher assistants in order to allow them to reach the full potential of this very unique role.

Creating a System of Support for the Whole Child

In order to move along the path warranted by these new roles, the program and school in general will need to be equipped to more fully meet the needs of the whole child, even though the personnel of the Accelerated Learning Program have been attempting to work to this end as far as possible. If the basic components of a student's life exist within a network of domains that include the home, community, and school, the most effective approach to enhancing the child's personal development is to work in a manner that addresses his or her life in all of these settings. The ability of students to become actively engaged as learners in response to the stimuli presented by their programs is often determined by other factors in their lives. Especially with respect to the students involved in this study, the struggle to get parents involved in their children's education needs to continue to bring about support for the ethic and activities that underscore the program.

Further, a systematic vision to providing support in all areas of a child's development needs to be brought about: an approach that connects all individuals involved in a child's development, from parent and grandparent, to sibling and peer, to teachers, social and child welfare workers, and counsellors. The provision of counselling services, for example, is imperative for certain students to enable them to learn to cope with many of the issues affecting their personal and academic growth.

The facts of a student's home life that impinge on his or her ability to become fully engaged in school must be acknowledged and brought to the awareness of the members of the school staff who need to know. For example, poor attendance among particular students was an acute problem on two counts. First, attendance problems

throughout their school career had left gaps in their education for certain students that were being exacerbated by their continued absence; their increasing discomfort with, and in some cases disengagement from, school became apparent through interview and student profiles. Second, it had become difficult for the school to follow up on cases in which students were absent for long periods, due to a lack of staffing and to the persistence of the problem. However, teachers recognized with unease the gap in communication between school and community that made it difficult for them to tell whether a student was absent for innocuous reasons (i.e., the student simply did not want to attend or had left the community with his or her parents for a period), or for more serious reasons that warranted intervention.

Conclusions

The program is to a large extent flexible and resilient and can withstand many of the mechanical curves thrown at it in the course of day-to-day running, but at a cost. Due to what appeared to be problems endemic to the way the school functioned as a whole, basic program goals were not being met. However, the act of meeting the needs of students who are "at risk" for academic failure extends far beyond the relief that a single period in the ALP room can offer.

Becoming an effective teacher in an inclusive setting is a challenge no matter what population you consider, but the challenge is magnified in a First Nations setting. Teachers with little training in special needs must also contend with culture shock and role disorientation. Schools must recognize this pattern, and take steps to ingratiate teachers into the role that is expected of them, as defined by the community they have joined.

Stepping back, the Accelerated Learning Program can be seen to contribute to the process of community building among First Nations in several ways. The program capitalizes and in fact depends on the ability of a select group of community members to succeed in the role of teachers. The selection of community members as instructors not only builds continuity within the program by engaging people who have had extensive experience both in the community and in community education, but it also heightens the chances that the program will indeed be able to address the whole child because those staff members tend to be aware of elements of each child's family and community life that shape students' ability to try their best at school.

Further, the teacher assistants who participate in the program are gaining experience that will hopefully bring the community closer to realizing the goal of having locally based Native teachers teaching the community's children. Many of the TAs involved with the ALP program have also enrolled in a teacher-training program that is being piloted in the community. Although the women in question have been involved in community education through its many transformations, this program in conjunction with their experience in ALP will allow them to balance their on-the-ground know-how with a sound academic background in the teaching profession.

Recommendations

The school as a system needs to evolve to the point where a comprehensive approach to special needs becomes part of its vision and day-to-day operation. In such a context, ALP would be only one part of an overreaching safety net designed to meet the needs of every child. This system would be best created through, and based upon, first, a foundation of collaboration and communication between all learning settings; and

second, continuity within the program, between the program and homeroom settings, and between classrooms in each division. Collaboration begins with recognition of the common frustration and bewilderment with which people often face the challenges that special needs pose. The search for effective ways to meet these needs can be cut down through a working arrangement based on the sharing of ideas, information, and creative teaching, programming, and managerial arrangements. To be successful, such a transformation should be devised and negotiated from the "bottom up," with the inclusion of all stakeholders involved in the education of the whole child.

Support also needs to be available for staff to assist them in meeting the expectations and rigours of their role in this particular setting. An effective orientation to the setting should include a participatory, reflective, and ongoing discussion on what it means to be a teacher in a locally controlled, on-reserve First Nations school. Teachers need to be provided with a concrete sense of the direction in which the community desires to move its school system.

Further, without an honest effort to include staff in the planning and transition process, without ongoing professional development through in-services, modeling, and mentorship opportunities, and without the transfer of relevant research to practice, it can only be expected that personnel will stick with what they already know, regardless of whether that knowledge is appropriate to the needs of this body of students or not (Taylor, 1995). Teachers and teaching assistants need to receive regular professional development on various aspects of special needs, language arts and math instruction, and cognitive instruction in general. Topics should be dictated by the characteristics and

needs of the student population in question and by a careful self-analysis by teaching staff of their strengths and needs (Finnan & Swanson, 2000).

Within the Community

If the relationship between culture and the impact that culture has on the approach to learning were understood, a teaching and learning situation could exist in which the learner would no longer be solely responsible for adjustment to the situation. This implies that traditional power relations—in which the teacher controls the means of participation, pacing of instruction, and organization of teacher-dominated instruction—would have to be modified to adjust to the culture of the students: “True cultural insight” enables one to look beyond differences that are superficial and socially determined to the integrity of the individual (Nolen, 1988).

Beyond the preparation of moose-hide, beadwork and dances, the culture of a community is about current practice, behaviour, and the world views that underlie and shape how and why people do things in a certain way. Culture is constantly changing, evolving in response to the rigours of daily life and experience. And whether in reference to a First Nation numbering a thousand or a nation of some 31 million, communities are always characterized by a multitude of cultures, often posing a challenge to one another. The challenge of defining one's selves as a community, an intrinsic part of the community building process, is in fact a struggle to decide which culture (i.e., which practice, behaviours, values, goals, orientation, and so on) will dominate. The rifts created by this dynamic in the community filter naturally into the school community, manifesting in ways that both impede and facilitate the ability of the school to fulfill its role as a tool in the process of community building.

Parent-School Relationship

The most obvious expression of a cultural rift has been the failure of the school and parents in the community to reach a point of mutual direction and understanding. Addressing the whole child effectively in the school setting necessitates a working relationship with their parents (Deyhle & Swisher, 1997). In this particular school, the lack of such a relationship has impeded the school's ability to effectively address behaviour and discipline, to moderate social relations among students, and to adequately cope with students' emotional and, in some cases, physical well-being. It has also impeded the ability of parents to fully understand the importance of their role in their children's education. In interview, some teachers expressed a feeling that from the moment they were hired, they felt that they were part of an institution that received absolutely no support from the community:

Can you describe the place of the school in this community? By people out there? [Pause.] Baby-sitting service? [Laughs.] I think it's a "have to" thing. You know, it's something you have to do, to send your kids there. Yeah. It's not like a privilege, you know? It's not like there's anything special that they get taught for free, free lunch. And they compare to themselves, when they went to school. They didn't need it.

The rift can be brought back to a conflict between fundamentally differing conceptions of parenting and socialization. In conversation, several members of the teaching staff commented that their students' parents represented the opposite of what they as teachers were trying to do with the children: "Sure, parents do what's best for their children, but what if they don't know how?" Criticism was levelled at what they saw as a tendency of parents to foster too much independence in their children; common examples cited to support this idea include parents who allow their children to decide whether or not they will go to school, to stay up to extremely late hours at night, and to

play and roam about without any supervision. Teachers also cited a lack of respect among students that they suggested stems from a lack of discipline at home. In general, teachers held an image of parents as being "part of the problem"—apathetic, resistant, and in general troublesome to deal with.

These comments seemed to have been made, however, without any attempt to understand how parents approach their role as parents. When the issue of "educating parents about parenting" arose in a focus group discussion, for example, the general attitude was that such an effort would occur in a vacuum. There was no indication that participants even suspected that there might be another rationale or approach to parenting of which they were unaware.

Although some teachers had conducted home visits at the beginning of the year, the visits for the most part were described as short and cursory in nature. Visits of this nature can be a good introduction to local norms and cultures, providing an opportunity to gauge how the child functions within the family, what type of interactions are typical and normal in a given family (for example, how children respond to authority figures in the home), and what general factors are impacting a child's life at a given point in time.

Teachers need to be fully aware that they are entering life in another culture (or cultures) towards which they must be flexible and adaptive if they are to be effective as participants. The building of a relationship and foundation of mutual understanding with parents needs to be acknowledged as a fundamental aspect of the teacher's role in the First Nations community school. It is an essential tool in the attempt of teachers to be accountable to their students and to the community.

At an institutional level, the school has been working hard to build a closer relationship with parents using a variety of techniques. The school and school board have made several attempts to facilitate a parent council, response to which has been limited. The school also sponsors community events on occasion, including sober walks and dinners. At the classroom level individual teachers have made an effort to get parents involved in their children's education by beginning at-home reading programs and by sponsoring an open house. Response to these initiatives has been limited. Finally, although improving parental involvement with various aspects of the program had been a goal of the ALP coordinator since the program's inception, few parents had become directly involved.

On the other hand, it must be acknowledged that this goal has proven very difficult to meet not only in this community, but also at on-reserve schools in general. Schools have to fight against the none-too-distant history of mistrust and alienation that characterized the only experiences many parents have had of school. Now looking back and laughing, one parent related how her family would purposefully ignore knocks at their door when a teacher came to visit; assuming that "no news is good news" from the school, they would remain silent and pretend that nobody was at home until the person went away.

In interview and conversation, the roles that parents saw themselves fulfilling in the context of their children's educational and personal growth were very divergent. The degree of direct involvement by parents in their children's education (e.g., helping them with homework, communicating with the child's teacher for the purpose of gauging their progress) varied greatly within this group of participants. For those who characterized

themselves as not particularly involved, the lack was attributed to a variety and combination of factors, including:

- a lack of comfort and self-confidence when it came to dealing with the school due to their own low level of literacy or education. Even though most parents declared that education was a priority for their child or children, some parents simply felt that they had nothing to offer in this respect due to their own lack of experience with school.
- a view that the school is no place for parents due to participants' own memories of their experience at school, in which their parents were for the most part marginalized. "*How did you own parents participate in your schooling?*" "I've never seen my parents at the school. They said that wasn't their place, because they didn't know how to speak English."
- closely related, a view that education is outside of their domain of responsibility. Several participants indicated that they felt that meeting the academic needs of their child was the job of the school, whereas it was their responsibility to attend to other aspects of raising him or her. However, in the context of a pile-sorting activity in which participants were asked to list the various caretakers who should take responsibility for meeting various specified needs, the responses of many participants indicated that they considered meeting the more global aspects of a child's development to be their responsibility (for example, his or her social development, emotional well-being, and so on). Again, this suggests that many parents felt that academic skills were too far outside their realm of expertise to make a

contribution, despite their own level of education, which varied greatly over the group.

- a lack of comfort dealing with the school due to disease with school culture or perceived attitudes:

Do you mean [teachers] have high expectations for kids attending a band school? No, they have different expectations than, because most of the teachers here are White; they're not Native. And so they're not familiar with the culture; they're not familiar with how kids are [on reserves]. Like, they might think some of the behaviours rude, when actually that's normal around here. In the city, it's really different. . . . You think that makes a difference? . . . Big time. . . . [The teachers] aren't used to them. I mean, they are a little more active and louder than what you'd see in a city school. That's a little bit of a culture shock to a lot of these teachers who come here, and they're not used to that. You know, "Stand in line. March in. Don't talk."

- a lack of time. Many parents had other children, a job, and/or were attending school themselves at the time of the study, and they indicated that they found it difficult to make time to go to the school.
- A lack of appreciation of the significance of a parent's role in his or her child's academic development in general.

Some parents stated that they simply felt unwelcomed or out of place in the school environment. Others stated that they had given up on the school's ability to "get it right" and implied that they were merely enduring the system for the sake of their children. A couple of parents with limited education themselves and whose lifestyle was in fact far removed from the world embodied by the school simply could not relate to the questions the researcher posed regarding parental involvement in school. Further, still other participants indicated that they were leery about letting teachers into their homes sometimes, because "they poke their nose in [to the family's business, judge them], and

the next year they're gone." Finally, some parents felt that many of the teachers tend to "judge the whole pack of kids on the basis of a few bad apples. . . . 'Send them to prison!'"

However, there were also a significant number of parents who were intimately involved in their children's academic life. These parents generally had completed a higher level of education themselves or were in the process of upgrading and possessed an understanding of and appreciation for the value of education that were in general more in line with the dominant view of education held by the school itself.

The School as a Mirror of the Community

The function of the school in First Nations communities is markedly different from that of schools in the non-Native setting. Once a community has taken control of its education, the implication is that it will suddenly be set to address the challenges facing their children through use of their own values, visions, strengths, and means. However, the presence of the community in this school seemed very limited. In a way, the school seemed to be community run only from the outside; due to the experiences and outlook of its mostly southern staff, the school seemed to be more of a southern school from the inside.

The lack of direction was most immediately visible in the lack of a total vision for education. Although it is unrealistic to expect total consensus within a community of varied outlooks and experiences, the fact that parents were unable to articulate what they wanted out of the school beyond the success of their individual children and that the only people who had a broad sense of the role that the school could play in the community's future were members of the school board indicates that this vision is lacking. And in a

situation in which the community is unable to articulate a general direction for education, the expectation that the school will be able to successfully prepare students to meet the community's future needs may be unrealistic.

Concluding Remarks

In general, the goal of the Accelerated Learning Program has been to enhance the individual empowerment of students by attempting to facilitate, as much as possible, improvements in the achievement levels and self-regulated behaviour of students. In a manner of speaking, this project is both a precursor to and the epitome of the more general process of community building.

Despite the challenges discussed above, the gains made by the band in the creation of a local system of education, given the short space of time since its inception, are remarkable. Several people commented that the community in general has come a long way in the past 10 years in terms of its understanding of education. Some attributed this to community members' closer proximity to "the issues" now that the band has control over the system. Another factor is the speed with which things have been changing for this community. As several community members made clear, the time is not so far past when contact with the nearby urban centre, Peace River, was rare and dominated by a horse and buggy on a dirt road.

The rate and degree to which the band has become involved in the regional economy is another factor. The number of families who can be said to follow a "traditional" lifestyle is negligible, particularly when compared to what the number would have been a generation ago. Parents were overwhelmingly aware that their

children will not be able to survive in the current regional economy with a limited amount of schooling, even though they may have been able to do so in the past.

Although this progress in attitude and savvy is remarkable, however, there is a long way to go. There was a sense among study participants that people have assumed a position of ownership over the community school, but this has more often been expressed in negative than in constructive ways. The ability of an irate parent to have a school-based decision overturned or of the student accused of vandalism to remark that "this is our school; we can do what we want with it" does not come close to revealing the potential for positive, community-driven change that is present in this community.

However, the best memories the researcher will take away from this experience was the chance to meet some of the community and school members who are ready to act collaboratively to change people's minds about education. One of the most positive aspects of the research session is that, with rare exceptions, the researcher failed to meet any individual who could be described as apathetic towards education. It was striking how many people who were, at some level, personally engaged in questions of how to bring about improvements in the school system. The fact was that almost everybody had an opinion on the subject and had reasons for the behaviour and attitudes they displayed.

The next step will need to be to bring these opinions into open discussion. The challenge is to bring empathy and patience into the picture: to try to locate the concern and energy in the community, to get different ideas out into the open without prejudgment, to settle on a vision for development, and then to tap into the creativity and energy embedded in this community to work towards that vision. It is imperative for people in both the school and community setting to get into the habit of looking at the

situation from the other person's point of view and to begin to take the initiative to instigate relationships. For the school, building relationships is part of the process of living in a community and becoming a part of the path that that community is following. For the community itself, building relationships is the first step in seeing the vision for the future of your children and community through to the end.

Native people have been studied more than any group in this country, and still little has changed in terms of the challenges they face in education. Throughout the research process, there was still a feeling at some level that we, as educators, are still looking to change students into an image of ourselves. That is why the approach of this study has been to suggest that, because I am examining systemwide issues (many of which extend well beyond the boundaries of the community), systemwide change should be the goal, no matter how difficult it is to bring about.

In student interviews the question, "Do you think you're a good student?" was often met with bewilderment or discomfort. Those who answered "yes"—even those who were characterized by their teachers as being increasingly successful in the learning context—tended to associate "being good" with not getting into trouble in class, not with their own strengths and ability. The strength of the ALP program is that, by virtue of being founded on solid relationships between student and instructor, it is in a position of prime advantage in the pursuit to address the growth of the whole child. However, the program can effect only so much during one period in the day. If the school in partnership with the community can bring about the active engagement of students in the learning process, it will be more than halfway through the battle of equipping students to excel at school and to deal with their special needs in adult life.

CHAPTER 7

CONCLUSION

Research has consistently demonstrated that among instructional approaches, reinforcement stands out as significantly more efficacious. This was consistently evident in ALP, through the interactions of students with teacher assistants, peers, and teachers. The results of this study also suggest that the more instructional techniques involved, the more effective the program will be. Because students may respond differently to different instructional methods, the more varied the approach, the more students may be positively affected.

Individual differences among students have long been recognized as critical determinants of learning outcomes. Perseverance in learning tasks and motivation for continued learning reinforce the conclusion that consistent engagement with the subject matter to be learned is critical to school success. The quality and quantity of instruction in the ALP program included the aspects of sound organization and systematic sequencing of instruction, effective use of direct teacher/teacher assistant centred instruction, and cooperative group learning strategies. However, further development and refinement of the ALP is necessary so that the instructional approaches can be more specifically targeted to groups of students in a very consistent manner. One of the issues of ongoing concern is that of maintenance, transfer of generalization of skills from the ALP program to the other content areas in the curriculum. Further research is warranted in these critical areas.

As evidenced by the research study, before we can accomplish the goal of appropriate programming more consistently for these students, much more research is

needed. The nature and characteristics of subgroups within the population of students with learning problems need to be more carefully examined. Distinctive subtest patterns and profiles, together with qualitative processing strategies, need to be delineated. Ways to match learning environments and instructional techniques to the unique needs of these students need to be found in order to release for the future the locked potential in these children.

The intervention that I have described herein may appear disjointed and overextended at first reading. Nonetheless, each facet of the program, and of the pedagogical philosophy behind it, emanates from a very coherent, if complex, rationale. In fact, I argue that the multistream nature of this rationale illustrates the full complement of issues and factors that must be taken into account when attempting to create an effective intervention for students with learning difficulties.

Many ideas and practices in the field of special education are currently under question. To begin with, the issue of whether instruction outside the regular classroom is the most appropriate option for students with developmental differences has yet to be answered. Many leaders in the field have acknowledged the inadequacy of the instructional practices common to pull-out settings, many of which seem inconsistent with the way that children learn. These statements are not put forward as support for the wholesale elimination of pull-out classes, because there are many young people for whom this is an appropriate and beneficial alternative. However, I do argue that the more options that a school makes available to its special-needs population, the more chances that the "continuum of options" will be able to meet individual needs. The ALP can

represent one of the options in this continuum in student achievement and local community empowerment.

The target of special education interventions has also been called into question. Traditionally, the total thrust of support has been focused on the "deficits" of children with learning difficulties. I argue that there must be a shift in focus to plan for validation of the strengths, talents, and abilities of such children. Although it may be difficult to bring about given the predominant current mindset, special educators must show innovation and flexibility when it comes to bringing out and capitalizing upon the *abilities* of students in this group; for example, by validating a child's oral language skills, if they happen to be strengths; or his or her visual motor skills, if they happen to be strengths; and even his or her social skills, personal talents and interests, and any other ability that the child may have. Substituting compensatory techniques that promote cognitive development, rather than spending so much instructional time at the lowest level of skill teaching, is an absolute must.

Development and Social Interaction

Coles (1987) considered cognitive development to be grounded in social interaction. His theory constitutes a step towards a general psychological model of relationships and interactions, in which development is presented as the product of interactions between the individual and his or her social environments. Rather than placing blame on parents for the "at-risk" behaviours of low-achieving students, Coles has attempted to redirect our view to the social interactions that are grounded in commonplace cultural beliefs, factors, and practices. He attributed detrimental behaviours

to those social, economic, cultural, and psychological forces that operate to shape the lives of low-achieving students and their families.

If one accepts the "active education" approach promoted in various guises by such theorists as Montessori, Dewey, Piaget, Vygotsky, Feuerstein, and Coles, one finds general continuity in their descriptions of the developmental experiences that must be present in children for them to learn effectively. In cases in which children are exposed to these experiences in the early years and their development processes are thus well developed by the preschool years, children are well prepared to learn by the time they enter grade school. However, for those children who did not have exposure to such experiences in their early childhood, they most often do not have the critical developmental skills necessary to learn once they begin school.

For those children who are not ready, it is critical that the school provide as many of the missing experiences that underlie readiness skills as possible and that they endeavour to ensure that students respond to such stimuli. I posit that the failure of schools to consider or acknowledge the multiple factors that contribute to a good education may be one of the main reasons that special education interventions have most often been unsuccessful. Participant feedback from the qualitative study revealed valuable insights into local aspects of community control over education, as well as the tensions that continuously hampered efforts to attaining the goals so eloquently outlined in the school's vision statement.

The Role of Teachers

The ability of general education teachers to teach to the variety of strengths and to cope with the range of needs present in a typical classroom has also been called into question. Too often, professionals have too few techniques, skills, and approaches available to them when it comes time to make decisions on how they will deliver the curriculum. Although several approaches have been discussed in these pages, the solution is not *just* modality processing or just direct instruction or the construction of a well-rounded program to reflect the necessary foundations for learning. Rather, teacher training must become a dialectical process that allows new teachers to understand and to draw upon disparate and varied methods. Rather than relying on the abundance of "teacher-proof" materials, professionals should to be encouraged to rediscover learning as an adventure in which they are a companion and guide, rather than an authority.

Intelligence means many things, but reasoning is an especially cherished aspect of school learning. However, reasoning is typically assumed to be subsumed in most areas of the curriculum, if it is considered at all. Teachers' preservice training often leads teachers to consider questioning as a failsafe instructional strategy for use across the curriculum. However, although questioning strategies are excellent tools, they should not be used at the expense of student-centred learning opportunities that challenge children to problem-solve and to learn by forming and answering questions themselves. In those learning contexts in which questions are generally left to the teacher and in which curiosity and creativity in problem solving are given limited space, students tend to become passive participants in the learning process.

Children come into the world eager to learn, and teachers should be prepared to engage as many approaches as necessary to maintain that curiosity, eagerness, and drive, despite the challenges that may face a child. Thus, instruction in ALP involves addressing not one set of issues, but all those implied by context-driven skill testing, meaning and phonics instruction, perceptual or process training, direct instruction, holistic education, and special education in general. The relative success of students in this program is due to the inclusion of many salient elements of a variety of skill-based teaching methodologies.

After initial teacher training, these issues need to be continually reinforced in the context of in-servicing. Those teachers for whom training was primarily based on how to teach average students with fairly evenly developed skills need to receive direction on how to help the "different" students, direction that parallels their experiences in class. Most general education teachers would be willing to learn and try to accommodate special needs, if enough in-class and pedagogical support were provided.

However, "support" must also extend to the human resources allotted to mainstream programs with a high level of special needs. If interaction theories are correct, schools must arrange classroom sizes and provide support personnel to make possible sufficient individual instruction to assist in the development of the skills that students are lacking. All the in-service in the world will not be enough to allow success in that setting if there is insufficient adult mediation.

The work of Henry Levin and the Accelerated Schools group illustrates that it certainly is possible to train school personnel to regroup classes in order to teach to the variety of skills needed by their student population, and to do so in a way in which no one feels inadequate because he or she has different instructional needs. Almost all students

would benefit: the able, the average, and the unevenly developed student. Ultimately, all would also develop better self-esteem, and fewer would be likely to drop out of the learning process or school altogether.

Schools need to believe that improvement and some degree of success are possible with every student; the route to that success, however, will be different for each one. Some of the difficulties that children experience may be immutable, whereas others may be addressed through remediation or compensation; still others need to be addressed in the home environment or in the school setting in general, or in terms of parent or teacher behaviour. However, some improvement in student performance is always possible. The quantitative analysis illustrates that a significant increase in individual and group achievement is possible if community schools consistently and systematically employ best practice instructional methodologies.

The Role of Parents

When parents are first informed that they have a child with a learning problem, they may be truly distraught. The information is usually presented with emphasis on the child's inadequacy; strengths are typically not implied in the label and may only later surface in the context of explanatory discussions, or perhaps not at all. Once the negative label is applied, it is difficult for parents to remember that this child is basically able, not unable.

Initially, parents often know only that they do not know how to react to the news. They feel that they must do something to help their child, but will be at a loss as to what to do. They may experience feelings of guilt, personal inadequacy, defensiveness, or, worst of all, inferiority. To add to the situation, parents frequently feel unfamiliar with

the interventions that the school may propose. If asked to participate in team planning, they may enter the scenario more as an outsider than as a main stakeholder; in the design of an Individual Program Plan, for example, they may not understand the concepts involved or the process implied and may not even feel confident enough to venture an opinion. Despite the best intentions, this could inadvertently lead to a situation in which the major decisions are left to the professionals.

My experience with the Accelerated Learning Program has taught me that it is vital that parents not abdicate their role as active partners in the education process. Particularly for parents of children with special needs, this role can be enacted in a number of ways. Parents can take an active role in making some of the changes necessary to making their child's program as beneficial as possible: by staying in touch with their child's teacher and by monitoring their child's progress, being aware of what to observe and when to ask that changes be made.

Most important, parents need to become knowledgeable guides, monitors, and advocates for their children's school experience. They need to become relative "experts" in the school system, its processes and issues, in order to become effective players. To advocate effectively for their child, they will need to become well informed about instructional approaches, placement options, curriculum options, and behaviour expectations. For example, more options exist in curriculum modifications than in placement changes; the more knowledgeable a parent becomes in what options are available in a given school, the more he or she will be able to help create an optimal learning situation in which his or her child can experience success.

Parents also need to become more sophisticated in their knowledge of "ability."

Parents need to know what is actually measured by ability tests, what type of needs special education addresses, and its effect on their child's learning. The use of those test scores is often part of the problem for the student with learning problems. Finally, parents need also to become aware of the issues facing a given program that may affect their child's success in the classroom, and to understand opposing points of view among stakeholders, so that they are able to negotiate the often intricate education process.

Parents must also be mindful of the degree to which learning and development occur in the home. Within families, parents need to model their own thinking behaviour in the process of living, so that their reasoning and thinking skills contribute to the development of those of their children. It isn't enough to provide mere "stimulation"; parents should also talk about their cognitive experiences, share their thought processes, and, most important, encourage the children not only to talk about their own processes, but also to relate them to experiences that they have had in the past or that they have heard about.

In truth, there is no one else in such an advantageous position to guide a child through the educational process. Parents and children evolve in tandem, supporting and challenging each other to develop ever more profound and intimate ways of knowing each other as they play out their lives together. Parents, ideally, should make time to be positively involved in their children's daily lives: to help them with their homework, to get to know their friends, and to answer their questions. Ideally, parents are in a situation in which they can provide balance and bring greater consistency between a child's life at home and that at school. Given this experience, parents are in an optimal position to

make positive school decisions based upon their child's particular needs and school experiences. They have the opportunity to make changes in both settings that will foster success.

A New Place for Students in the Learning Context

When children feel competent and able, they learn more easily. If they turn away from learning, they need to be redirected. This may be done by teachers or by parents by reassuring them of their worth as people and their ability to learn and by making other perceptible changes in curriculum content, activities, methods, materials, explanations, or placements that will facilitate learning. Young people need to be made aware that they are making progress at every step.

Schools must be aware of the cognitive and metacognitive processes that students need to develop in order to learn effectively at every level of school. In many cases, students come to school without having learned "how to learn" or, more specifically, how to learn in the way that schools require. Too often this training is implicit to the learning context, with the focus of instruction entirely on content. However, students with learning difficulties may be able to go much further if teachers make clear "how," rather than just "what," to learn.

For example, students with learning difficulties may need explicit instruction in the many study skills that they are typically expected to acquire implicitly through their educational career. These include skills in improving memory, listening, test taking, time management, organization, outlining, proofreading, self-monitoring, and evaluation; and in generalizing study skills and principles to different content areas. Although many study skills programs are available for secondary education, they are currently not

considered important for the elementary grades. Mastery of these skills is advantageous to all learners, but it is particularly important for students with learning problems and/or low achievement.

From the earliest grades students should be taught and encouraged to assume ownership over the learning process. It is always appropriate to put responsibility on the student by, for example, making sure that he or she is aware of learning outcomes and evaluation expectations. Student responsibility should also include his or her own assessment of how improvement may be made. When change in the program is being discussed, it may be helpful to prepare the student for what level of performance is expected, to rehearse the desired behaviour, and then to let him or her attempt the activity in a guided setting.

In terms of reading instruction, both students and teachers need to reconsider the pragmatics of reading. Typically, reading instruction is limited to phonics and comprehension, rather than as a means of social interaction. Many theorists have urged teachers to present reading in the same manner that oral language is learned; in other words, through its use as purposeful communication. The idea that the reader constructs meaning through the selection of a text, based on his or her personal knowledge base and experience, puts a very different light on "comprehension." In this framework the manner in which a text is received or understood may be very different from reader to reader, depending on his or her background.

As an extension of study skills, students should also be given explicit instruction in the effective "reader skills" that they will need as lifelong readers, no matter in what context they encounter texts—in the analysis or "handling" of texts. They should be

taught how to identify the "form" of the reading material that they are using, its purpose, and its intended audience. They need to be able to pick up essential information from the form (book, magazine, newspaper), narrative type, print type, and divisions (chapters, bibliographies, appendix, charts). They should also be taught the relationship and distinctions between oral language and written language as communication forms.

Furthermore, more time should be spent taking stock of students' listening skills and how they receive information and considering how these details can be best mobilized in the classroom. Teachers should consider student interest in the material with which they are presented and how motivation may be manipulated by changing the content or amount of information provided; how delivery of the material (e.g., presetting, previewing, preoutlining, restatement, review) affects the internalization of the material; how expectations stated explicitly at the outset of instruction (e.g., recapitulation, extrapolation/interpolation) may act as guides for active listening; and how the explicit modeling of listening behaviour may help students to understand what the process of active listening is all about.

Reconstituting Our Vision of Education

Our vision for education, thus, is one in which all stakeholders are less concerned with carving and delimiting responsibility amongst themselves for the education of children with learning difficulties and more committed to the long, arduous, and imprecise endeavour to find solutions. Our responsibility toward our children is to continue to try to find solutions. To do so, we need to be broadminded and understanding, flexible and responsive, mindful of each student's identity and story, and responsive to the particulars of his or her circumstances. Sometimes the appropriate route is to provide

support, whereas in other cases it is better to put them on their own; but that distinction cannot be predetermined or written out as a standard procedure. These decisions need to be made on an individual basis, but always in a supportive, and never vindictive, manner.

Special education assistance should never forestall the overall development of any student. However, this may happen if parents (and, where possible, teachers) are not vigilant in their effort to maintain balance in the child's life. The standards and behaviours of parents and teachers have a powerful long-term effect on children. Chances for success will be much greater if parents are able to distance themselves from too rigidly held expectations and overemotional involvement and if they are able to commit to the child their acceptance and confidence throughout the journey. Further, teachers must remember that any stigma, boredom, or experiences of failure that result from their program, no matter how well crafted or intentioned, may decrease the likelihood of the student becoming an active learner; or, in the worst cases, may ultimately lead to their dropping out of school altogether. The ability of adult behaviour to change or affect child behaviour should always be kept in mind. Learning is a social activity, and frequently the changes must begin with those working outside the learning context—the adults.

Learning is not simple: it is a complex process. The best that schools and parents can do is to make sure that elements of a good education are available to their children and not withheld because special assistance is needed. Students are not tutorial programs, and the guaranteed provision of mass, free education implies that compromises will be made by all stakeholders and service providers for those who have learning difficulties. Students also need to learn that sometimes learning will, of necessity, be teacher driven;

whereas teachers and schools need to acknowledge that, in other cases, learning decisions are best left to students.

Further research is warranted to investigate which treatment approaches are most effective and the causal processes by which they work. Questions such as, What subject areas were most affected by different instructional strategies? and What are the factors that influenced achievement? will be extremely salient in providing insight into more dynamic and effective programming. Particular attention should be paid to the interactions of instruction and learning disability characteristics.

In constructing the ALP, the goal was to identify the learning strengths of individual participants, as well as those of the ALP teacher and teacher assistants. Second, teaching was matched to learning strengths for difficult learning tasks. Third, the weaker ways/modalities of learning were strengthened whenever possible. Last, students were helped to select effective ways of learning through the use of learning strategies.

It is possible to conceive of a program that would provide assistance in remediating deficits, but that would also provide, in the early years of a child's educational journey, increased stimulation, mediation, and assistance in all areas of skill development; that would provide validation of student differences; that would impart a love of learning; and that would pace instruction according to student needs, delaying instruction when developmental delays were suspected and accelerating instruction in areas in which student talents, interests, and strengths were apparent. Most important, such a program would compensate for skills that may take longer to develop and would also accept differences that were unlikely to change. In my efforts to describe not only the success of the Accelerated Learning Program, but also the challenges that it continues

to face, it is my hope, not that the program described herein serve as a model for this vision, but that my experiences serve as a declaration that such efforts can be modestly successful.

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APPENDIX A

QUALITATIVE INSTRUMENTS

Appendix A: Qualitative Instruments

The following instruments were developed during the first research session at Cadotte Lake School in the early months of 2000. Generally, the goal of this session was to map out the factors that shape students' ability to perform to their full potential at school *in these specific communities*. As such, interview and focus group schedules were developed on-site in light of early discussions and observation in order to make the questions posed as relevant as possible.

Versions of the same instruments were used at the second research site, at Atikameg Sovereign School, during research conducted during 2000 and 2001. Subsequent to the first session at Cadotte Lake, however, research was not conducted to the same depth as during that first, exploratory session.

Contents:

- Key Informant Interview: ALP Coordinator
- Key Informant Interview: Teacher Assistants
- Key Informant Interview: Community Member
- Teacher Interview
- Parent Interview
- Student Interview
- Focus Group Questions: Teachers
- Teacher-Student Evaluation
- Ethics Commitment
- Sessional Timeline
- Cumulative Timeline

Key Informant Interview: ALP Coordinator

Date: _____
 Time: _____
 Length: _____
 Location: _____
 Name: _____

Section A: Acquaintance with "Acceleration" and "Accelerated Learning Programs".

1. Did you have any previous knowledge of "acceleration" or "accelerated learning programs" before exposure to the Just for Kids program?
2. Can you list any training you may have related to special education?
3. Can you list the ways in which students with special needs have been accommodated within the different schools you have worked at?
4. How was special education handled at this school before ALP was put into place?
5. How were you first made aware of the accelerated learning program that would be initiated by Just for Kids?
6. What were your initial impressions of the program?
7. What early attempts to relay the nature of the program did you find useful?
- a) What information would have been useful at this early stage, that was not offered?
8. Have you attended any professional development workshops related to accelerated learning programs, or program management? If so,
- a) Which sessions did you find particularly useful?
9. What features of the program were particularly attractive in light of school efforts to meet the needs of this particular body of students?
10. Were there any characteristics of the program that made it a particularly appropriate option for use with Native students?

Section B: Laying the Groundwork.

11. Please describe the planning phase that occurred in preparation for this school year.
12. What was your role in that process?
13. What structural changes related to school operation were implied once the program was put into place?
- a) What groundwork was set in order to facilitate those changes?
- b) Have these changes occurred?
14. Were there any elements of the program that were particularly difficult to implement at this school?

15. What role were teachers expected to play in the implementation of the program?
 - a) How were they made aware of these expectations?
 - b) What was their response?
16. How were teacher assistants selected to work in the program?
 - a) What type of training was provided?
17. How were parents approached about initial testing that would be done?
 - a) In general, what was their response?
18. How were parents approached about giving consent to let their children participate in ALP?
 - a) In general, what was their response?
19. What type of "support" is needed from parents, in order to make the program run effectively?
 - a) How were parents made aware of that expectation?
 - b) Have they been fulfilling that role? If not, what impediments have you noticed?
20. During the period when the program was first being implemented, did you find that you have had enough direction and/or support from:
 - a) the school administration?
 - b) Just for Kids?
21. What type of response did you have from the following groups once the program first began?
 - a) Teachers.
 - b) Teacher Aides.
 - c) Parents.
22. How did the **mechanics** of program change after it was initially implemented?
23. How has the **time-frame** under which the program operates changed after this initial stage?
24. During the time when the school was adjusting to the program, can you remember any problems that arose?
 - a) How was the problem dealt with?

Section C: The Role of Coordinator.

25. How did you initially approach your role as program coordinator?
26. Can describe your current approach to coordinating the program?
27. Do you have any background training or experience that you feel prepared you for the role that you currently play in the program?
28. What is the nature of the relationship between the roles that you and the school administrators play in the program?
29. What type of "support" is necessary from administration to complement your role as coordinator?
 - a) Have they been fulfilling that role?

30. What is the nature of the relationship between yourself and the Senior ALP instructor play in the coordination of the program?
31. Can you describe your approach to coordinating support staff in the program?
32. What factors make running the program difficult on a day-to-day basis?
33. What type of "support" is necessary from Just for Kids to complement your role as coordinator?
 - a) Have they been fulfilling that role?

Section D: The Role as ALP Room Teacher.

34. Can you describe the rationale of the program from a pedagogical perspective?
35. Generally speaking, how many students do you teach a day?
36. Does teaching in the ALP room demand a different management style than would be required in general education classrooms? If so, in what way?
37. During their first weeks in ALP, how do students new to the program adapt to changes in:
 - a) the curriculum?
 - b) scheduling and grouping?
 - c) the style of instruction and work pace?
 - d) the complementary roles that you, the TAs, and their home room teacher and TA play?
38. Have you noticed that the age of a given student affects their approach to the program when they are first becoming involved (i.e., between students joining the junior, as opposed to senior, ALP?)
39. Can you describe how the role that TAs fulfill has changed in response to the demands of the program?
 - a) Are they fulfilling that need?
 - b) If not, what obstacles do you see in the way?

Section E: Collaboration.

40. In general, can you describe the typical place of collaboration between teachers as it exists at this school?
41. How often do you meet with the homeroom teachers of your students?
 - a) What type of issues do you cover in those meetings?
 - b) Are there any other mechanisms through which information about a given student with special needs is transferred between the home room and ALP classrooms?
42. What kind of process is in place to help students make the transition from the ALP to general classrooms when they are being reintegrated (e.g., in terms of meeting the demands of current class content and skill level)?
43. In your opinion, is there enough collaboration between home room teachers, TAs and yourself to provide a smooth transition between the skills being taught in the class and ALP room?

44. How often do you meet with TAs in the program?
a) Generally, what type of issues do you cover in those meetings?
45. Can you describe in what ways you make use of IPPs?
46. Given the rate of teacher turnover that typically occurs at this school, are there any mechanisms to ensure continuity from the point of view of students?
a) Do you think that the program has been effective in providing a consistent style of instruction to students? If not, what impediments have you noticed?
b) Do you think that the program has been effective in providing consistency to students in terms of personnel? If not, what impediments have you noticed?
47. Have any of the TAs you've worked with in the program been reassigned mid-term?
a) In your opinion, what effect does the shuffling of support staff have on the program?

Section F: Personal Impressions of Program.

48. What sets this program apart from other types of pull-out special education programs?
49. Can you list those elements that you consider to be fundamental to ensuring the success of this program?
50. What strength(s) do you feel the program has to offer?
51. In what areas do you find the program lacking?
a) What measure do you feel would help to remedy this/these problem(s)?
52. Of your accomplishments with the program, what are you most proud of?
53. Were there any directions that you would have liked to have taken the program, that you were unable to bring about?
54. What qualities would you say are essential for a coordinator who is joining the program to possess?
55. What qualities would you say are critical for TAs joining the program to possess?
56. What factors will make sustaining the program at this school difficult in the long-term?
57. What place do you believe the program to occupy in the ethos of the school as a whole?

Key Informant Interview: Teacher Assistants

Date:
Time:
Length:
Location:
Name:

Section A: Experience with Acceleration and Community Education.

1. When did you first become aware of the accelerated learning program that would be launched at this school?
2. What were your initial impressions of the program, *before* you became involved?
3. When you were first assigned to the ALP room, what did you understand your role to be (i.e., how you would fit into the program, what role you would play in relation to students)?
4. What training have you had in relation to ALP?
 - a) What was most useful?
 - b) Was the training adequate in your opinion?
5. Did you feel prepared when you first started in the ALP room?
6. What other roles have you fulfilled at this school?
 - a) Do you consider your experience in the ALP room to be more or less challenging to your previous positions? In what way?
7. Do you feel that your experience at any of these positions helped to prepare you for your role in this program?

Section B: Experience in the Accelerated Learning Program.

8. Explain the purpose of the program in your own words.
9. In general terms, explain how the program works in your own words.
10. What adjustments to the program have been made since you got involved?
 - a) What were the reasons for those adjustments?
11. Generally, how many students do you see a day?
12. How do you manage to teach students with different needs in the same group?
13. Please describe a typical period with one of your groups.
14. Do you ever refer to IPPs?
15. How is information about a given student transferred between the home room and ALP classrooms?
 - a) Do you think communication between the two classrooms is important? Why?
 - b) Do you think there is adequate communication between the two settings?

16. How do you monitor the skill level of a given student?
17. What do you do when a child has done well on an assignment, or during a given session?
 - a) How do you cope with a child who had a particularly difficult session?
18. In your opinion, what makes this program stand out from other special education programs?

Section C: Place of Collaboration.

19. How does the role that you play in the program differ from that fulfilled by TAs in general classrooms
20. How does the role that you play in the ALP room differ from that fulfilled by the ALP coordinators?
 - a) How is it similar?
21. Does your relationship with the ALP coordinators differ from those between TAs and teachers in the general classroom? If so, in what way?
22. Do you generally feel that you can look to other TAs for help or support when you need it?
 - a) Please give an example of when you would approach another TA for advice or support.
23. Do you generally feel that you can look to teachers for support or help when you need it?
 - a) Please give an example of when you would approach a teacher for advice or support.
24. Do you generally feel that you can look to the school administrators for support or help when you need it?
 - a) Please give an example of when you would approach an administrator for advice or support.
25. Do you generally feel that you can look to parents for support or help when you need it?
 - a) Please give an example of when you would approach a parent for advice or support.

Section D: The Personal Growth of Students.

26. Do you think your experience as a parent has had an impact on how you perform your role as a TA?
 - a) What about the other way around: Do you think that your teaching experience has had an impact on your relationship with your own children?
27. What kind of 'growing up' do you think we do primarily at school?
28. Do you feel a part of that process in your current role?
29. Has your experience in the program affected the way that you view kids in any way?
30. How does your relationship with your students differ from your relationship with students in general education classrooms?
31. Have you noticed any change in their demeanour since they began coming to ALP?

32. Do you think that participation in the program has had any impact on their self-esteem?
33. Have you noticed any change in the way they relate to other students?
34. Have you noticed any change in their approach to learning or their work habits (i.e., independence levels, willingness to approach others for help, attentiveness)?
35. Generally speaking, in what way has participation in the program improved the academic performance of the students with whom you have worked?

Section E: Personal Impressions.

36. Do you prefer being a teacher assistant in the ALP or general education setting?
a) Why?
37. Please describe any goals you may have for your career.
a) Have these goals been influenced by your experience in the program?
38. What skills have you gained or enhanced since coming to work with the Accelerated Learning Program?
39. What makes this job stand out from other positions you have held?
40. What strength(s) do you feel the program has to offer?
41. In what areas do you find the program lacking?
a) What measure do you feel would help to remedy this/these problem(s)?
42. What would make the program work better?
43. What things are essential to making this program work well for students?
44. What qualities would you say are essential for someone who is joining to program as a teacher aide to possess?
45. What factors appear to make running the program on a day-to-day basis difficult?
46. What factors will make sustaining the program at this school difficult in the long term?

Section F: The Evolution of Local Education.

47. Describe what education was like in this community when you were growing up.
48. How has community school changed since that time?
49. Can you describe the ways that students with special needs have been accommodated at this school before the introduction of the Accelerated Learning Program?
50. How does ALP fit into the school and the needs of its students as a whole?

Section G: The Community's Role in Education.

51. What kind of role do you think parents should play in their children's education?
52. Can you comment on how parents of ALP students generally view the program?
53. Do you think it is important to have community members working in the school?
54. Do you think the education of children should be a high priority for a community such as this? Why?
55. Do you think it's important for a band to have control over its education? Why?
56. Do you think it's important for the school board to be elected by community members?
57. Have you noticed any change in the quality of education delivered at this school since the band took control over education from Northlands?
58. Are you generally satisfied with the job the school is doing?
59. What changes would you like to see at the school in the future?

Key Informant Interview: Community Member

Date:
Time:
Length:
Location:
Name:

1. How long have you lived at Cadotte?
2. How has the community changed over the past ten years?
3. How has the relationship between the community and the communities that surround it changed over the past ten years?
4. What things stick out as major changes in community living, from the time when you were young?
5. What things stick out as major events in the history of the community?
6. What was education like here when you were coming up?
7. How has life changed since the band started to regain control over things like their own resources, and social services like education?
8. How long have you been involved in education here?
9. How has education changed over the last generation in this community?
10. Please describe the take over process, from the point when the decision was made to assume control over education.
11. In your opinion, why is it important for the community to have control over the way its children are educated?
12. What is the role of the school board?
13. How do you think the move to an elected school board has affected the way education is handled in Cadotte?
14. What changes in the education system would you like to see in the future?
15. How have relations between people here changed over the years?
 - a) Do you think that children have changed over the years?

Teacher Interview:

Date:
Time:
Length:
Location:
Name:

Section A: Acquaintance with "Acceleration" and "Accelerated Learning Programs".

1. Did you have any previous knowledge of "acceleration" as a technique before exposure to the Just for Kids program? If so, please describe.
2. Did you have any previous knowledge of "accelerated learning programs"? If so, please describe.
3. Can you list the ways that students with special needs have been accommodated within the different schools you have worked at?
4. How were you first made aware of the accelerated learning program that would be initiated by Just for Kids?
5. Can you recount your initial impressions of the program?
6. What early attempts to relay the nature of the program by administration and members of Just for Kids did you find useful?
 - a) What information would have been useful at this early stage, that wasn't offered?
7. How many professional development workshops have you attended related to the ALP?
 - a) Which ones did you find particularly useful?
 - b) Are there any topics that come to mind that might have been useful, and that were not offered?
8. How did your understanding of the **purpose** of program change after it was initially launched?
9. How did your understanding of the **mechanics** of program change after it was initially implemented?
10. How did your understanding of the **time-frame** under which the program would operate change after this initial stage?

Section B: Initial Experience with the Program.

11. Generally speaking, what percentage of your class participated in the program during its first year?
12. What percentage of your students are in the program this year?
13. During the first semester of this programming, how did the students in your class who were to participate adapt to changes in:
 - a) the curriculum?
 - b) scheduling and grouping?
 - c) the complementary roles that you, your TA, and the ALP teacher played?

14. To your knowledge, have any students, who in your opinion *would* benefit from participation in ALP, ever been overlooked for inclusion in the program?
 - a) Why do you believe he/she should have been enrolled in ALP?
 - b) Are you aware of the cause(s) of the omission(s)?

Section C: Coordination Between the General and Accelerated Learning Programs.

15. What kind of process is in place to help students who are being reintegrated make the transition from the ALP to general classrooms?
16. In relation to students who have been re-integrated into your class from ALP, are there any mechanisms in place to help the student to meet the demands of current class **content**?
17. What adjustments to **curriculum** do you usually make to help students make that transition?
18. How do you accommodate the **skill** level that a given student has mastered in ALP?
19. What materials have you found useful in adjusting your curriculum to accommodate the program?
20. What alterations to your class **management style** do you make to accommodate these students?

Section D: Meeting Basic Objectives: The Multi-Faceted Growth of the Student.

NB: The participant will be directed to answer the following by both commenting on the general disposition of her students over the course of her involvement in the program, and by citing cases that differ from the norm.

21. Generally speaking, in what way has participation in the program improved the academic performance of your students?
22. Are there any academic concepts, skills or material that you have found the program to be *ineffective* in enforcing?
 - a) If so, can you suggest why?
23. Have you adjusted elements of your program to address this (these) problem(s)?
 - a) If so, what was/were the result(s)?
24. Generally speaking, have you noticed participation in the program to have any effect, positive or negative, on the social growth of your students?
 - a) If so, what do you believe was the cause?
25. Generally speaking, can you comment on what impact participation has had on the self-esteem of your students?
26. Have you noticed any change in your students' work habits since they began attending the program?

27. To your knowledge, have any of your students in ALP ever participated in pull-out special education programs before?
 - a) If so, did you notice a change in their self-esteem or demeanour after they began to participate in ALP?
 - b) What do you think was the cause?
28. Can you comment on the attitude of students in your class who did not participate in ALP towards the program?
 - a) What was their general understanding of it?
 - b) What was their attitude towards students who participated in the program?
29. Can you comment on how parents of students who participated in ALP reacted to the program:
 - a) upon being first approached about it?
 - b) after their child became involved in it?

Section E: Meeting Basic Objectives: The Creation of Continuity.

30. Are there mechanisms in place to provide continuity for students, in light of the rate of teacher turnover that typically occurs at this school?
 - a) In your opinion, are they adequate?
31. Are there mechanisms in place to provide continuity in light of the typical turnover rate of teacher assistants at the school?
 - a) Do you believe that they're adequate?
32. What grade level were you teaching when the program was first implemented at this school?
33. Have you taught any other grades since that time, apart from that and your current placement?
34. Have you experienced any mid-term classroom re-assignments since having come to work at this school?
 - a) If so, do you feel such shuffling has any adverse effects on the continuity of the program from the point of view of students?
35. Have any of the TAs you've worked with in your classroom been reassigned mid-term?
 - a) Do you feel that shuffling of support staff has any adverse effects on the continuity of the program for students?

Section F: Collaboration and Classroom Management.

36. In general, can you describe the typical place of collaboration between teachers as it exists at this school?
37. How often do you meet with teacher assistants and the ALP room teacher to coordinate the skills being taught to each student?
38. Can you describe in what ways you make use of IPPs?

39. Are there any other mechanisms through which information about a given student with special needs is transferred from a former to new teacher:
- a) at the beginning of the academic year?
 - b) at any point in the year, when new staff is hired?
 - c) at any point in the year, when a student's class assignment is changed?
40. Can you describe your typical relationship with the school's special education teachers before the ALP was implemented?
41. How did that change over the course of the program's implementation?
42. Generally, what role do you feel that you need the special education teachers to perform?
43. Are they fulfilling that need?
- a) If not, what obstacles do you see in the way?
44. Can you describe the role that TAs typically played in your classroom before the implementation of the program?
45. How did that change after the program was put into place?
46. What role do you feel you need your TA to provide?
- a) Is he/she fulfilling that need?
 - b) If not, what obstacles do you see in the way?
47. Did you find that you have had enough direction while making classroom adjustments, from:
- a) special education staff on site?
 - b) the school administration?
 - c) the Just for Kids support system?
48. Can you describe any adjustment attempt(s) that didn't work out?
- a) What was (were) the reason(s)?

49. Please rate the following support sources in order of which you would turn to them for questions related to:
 (a) a given student in the ALP;
 (b) curriculum materials;
 (c) personnel difficulties (which involve a staff member or student in the program); and
 (d) the program itself.

You may cross out any options that you feel you would never consider using, or that seem irrelevant to the problem.

Source	a	b	c	d
your teacher aide				
resource room teacher				
other teachers in your division				
teachers outside your division				
a teacher(s) who have previously taught the student in question				
school councillor				
school administrators				
school board				
a parent				
resource material (please specify below)				
friends, family outside of the school				
<u>Just for Kids</u> support system				
Other (please specify)				

Section G: Personal Impressions of Program.

50. What strength(s) do you feel the program has to offer to your classroom, if any?
51. In what areas do you find the program lacking, if any?
52. What measure do you feel would help to remedy this (these) problem(s)?
53. What effect would you say the accelerated learning program has had in meeting the challenges of your job?
 a) In what ways could it be of more help?
54. What information would you say is critical for new teachers who are being introduced to the program?

55. What factors appear to make running the program on a day-to-day basis difficult?
56. What factors will make sustaining the program at this school difficult in the long-term?
57. What place do you believe the program to occupy in the ethos of the school as a whole?

Parent Interview:

Date:
Time:
Length:
Location:
Name:
Student:

Section A: Experience with the Accelerated Learning Program.

1. How were you first approached about the program?
2. How was the purpose of the program explained to you?
3. How was the need for your child to participate in the program explained to you?
4. Did you have any reservations about giving permission for your child to participate in ALP?
5. In your mind, what challenges does your child face, related to his/her ability to learn?
6. Has (have any of) your child(ren) ever participated in another special education program?
7. How well do you feel the program (has) helped your child academically?

Section B: Goals for Their Child's Education.

8. Generally, does he/she like going to school?
9. Where do you think your child's strengths lie academically?
10. Can you give me an example of a time when your child was particularly excited over something he/she had done at school?
11. Does he/she ever seem particularly stressed about attending school? If so, can you give me an example?
12. Where do you think your child's strengths lie as a person?
13. What hopes do you have for you child, in terms of his/her education?
14. Where do you want to see your child by age twenty?
15. Do you think that his/her education will play a big part in getting him/her there?

Section C: Role in Education.

16. How often do you usually visit the school?
 - a) For what purpose?
17. Have any staff members ever visited you at home?
 - a) For what purpose?

18. Are you satisfied with the rate of contact you have with members of the school staff?
19. Besides school, what other factors do you think are important in raising a child?
20. Can you describe what role you feel parents should play in their children's education?
21. Are you able to fulfil that role?
22. The education of young people is a complex undertaking, and one that necessarily involves a wide-range of people. In your opinion, who should be involved in meeting the following responsibilities? (Your answers do not necessarily have to be given as "either/or", and may include as many options as you wish.)

	<i>Parents</i>	<i>Teachers</i>	<i>Teacher Assistants</i>	<i>School Administration</i>	<i>Community</i>	<i>Other</i>
Teaching academic skills						
Helping the student to cope with a learning disability						
Behavioural problems						
The child's social development (i.e., how they relate to other people)						
The child's emotional development (e.g., self-confidence)						

Section D: Educational Experience.

23. Can you talk about your own experience at school?
24. Do you remember it as a good period in your life, or not?
25. Were there any particular subjects or activities that you remember enjoying or excelling in at school?
26. What areas did you find particularly challenging at school?
27. What was the role of the community in their children's education when you were young?

- 28. How did your own parents participate in your schooling?
- 29. What part did school play in getting you to where you are today?
- 30. Are there any areas that you feel school failed to prepare you for?

Section E: The Place of the School in the Community.

- 31. How has community schooling changed since you were coming up?
- 32. Can you describe the place of the school in this community?
- 33. Do you think it's important for communities to have control over the way their children are educated?
- 34. Do you think it's important for the school board to be elected by community members?
- 35. Have you noticed any change since the band took control over education from Northlands?
- 36. Are you generally satisfied with the job the school is doing?
- 37. In what areas do you feel they need to improve?

Student Interview:

Date:
 Time:
 Length:
 Location:
 Name:
 Grade:
 ALP Session:

The student was warned at the beginning of the interview that he/she would not have to answer any question that he/she did not want to, and was informed that everything discussed in interview was confidential. However, if his/her parent had requested a copy of the transcript of the student interview, he/she was also made aware of this.

Section A: School Experience.

1. Do you like coming to school?
2. Tell me about your classroom.
 - a) What do you like about being in that class?
3. Tell me about your teacher. What do you think of him/her?
4. Tell me about your TA. What do you think of him/her?
5. What things are you good at in school? [What subjects do you really like, what things do you like to do? If you had a free period in class and could work on anything you wanted, what would you do?]
6. What subjects do you not like in school?
7. What do you think is the hardest part of school?
8. Tell me what you do in class that makes you a good student.
9. Do you ever feel worried about coming to school?
10. If you were in your class and you were having trouble with a certain question, which would be better: to work out the problem by yourself, or to ask for help? [Who would you ask for help?] Why?
11. How many special friends do you have in class?
 - a) How many friends do you have in other classes?
12. Do you ever work with other students in class? [Pairs, groups? For what subjects?]
13. Do you ever give help to other students when you're in class?
 - a) What does that feel like?
14. Do you ever get help from other students when you're in this class?
 - a) How do you feel when that happens?
15. When was the last time you got really excited about something you did in class?

16. When was the last time you did really well on an assignment or activity in class?
a) How did that make you feel?
17. Are there days when you find the work harder than usual?
a) How do days like that make you feel?

Section B: Accelerated Learning Program: Relationships and Social Development.

18. Tell me about the ALP room.
a) How is it different from your own classroom? [How it looks, how it sounds, how you feel when you're in there, etc.]
19. Tell me about [the ALP coordinator]. What things do you like about her?
20. Tell me about the time you spend with her. What makes it special?
a) How is that time different from the time you spend with your homeroom teacher?
b) How is it the same?
21. Tell me about [his/her TA in the ALP room].
a) What things do you like about her?
22. What makes your time with her special?
23. How is the help you get from [his/her TA in the ALP room] different from the help [his/her homeroom TA] provides?
a) How is it the same?
24. Did you know any of the TAs from outside of school, through your family or friends?
a) Do you like having people you know from outside in the school?
25. How many special friends do you have in ALP?
26. Do you work in a group when you're in ALP?
a) Who else is in your group?
b) What do you like about working with those students?
27. Do you ever give help to other students when you're in ALP?
a) How does that make you feel?
28. Do you ever get help from other students?
a) How do you feel when that happens?
29. If you were having trouble with a question in ALP, what would be better: to work on the problem by yourself, or to ask the teacher for help?
30. Which is better: to work through a question by yourself, or to figure it out together with another student in your group?
31. If you're stuck on a question, which is better: to ask a friend in your group for help, or to ask your ALP instructor for help?
32. What do you like better: learning in a small group, learning in a class, or learning by yourself? Tell me why.
33. Is there anyone in the ALP room you don't particularly like working with?

34. Do your friends in school know that you go to ALP?
a) What do they think about that?

Section C: Academic Progress and Personal Growth.

35. Do you like working in ALP? Tell me why.
36. Which class do you like being in more, ALP or your homeroom class? Tell me why.
37. What subject(s) do you work on in ALP?
38. What type of work do you do in the ALP room?
a) Do you like that type of work?
39. Do you find the work you do in ALP easy or difficult?
40. When was the last time you got really excited about something you did in ALP? Tell me about it.
41. Give me an example of a time when you did really well on a worksheet.
a) What did your instructor do?
b) What did you do to succeed on that assignment?
42. Does this happen a lot?
a) How do you feel when that happens?
43. If you were having trouble with a worksheet, what would your instructor do?
44. Are there days when you find the work harder than usual?
a) Do you have more days like that in your homeroom class or in ALP?
b) How do days like that make you feel?
45. Tell me what you do in ALP that makes you a good student.
46. Can you remember a time when you didn't want to be in ALP for one reason or another?
47. If one of your friends was going to start coming to ALP, and asked you what it was like, what would you tell him or her?
48. Do you ever talk to your parents about ALP (e.g., things you do in class, other students, etc.)?

Focus Group Questions: Teachers

The topics that I would like to cover in the group discussion on Monday are listed below. They are only intended to "kick start" a discussion in a given direction; after that, you can take the conversation anywhere you want to. Also, please consider whether there are any topics you would like to bring up in this setting.

1. What does "teaching the whole child" mean to you? How feasible is that approach in your own classroom?
2. What need is there for improved communication between ALP and the general classroom? What could be done to bring this about?
3. Please describe the division and/or sharing of responsibilities related to students with special needs, between staff in the ALP and general classroom settings. Can it be improved?
4. What degree of individualized programming do you feel is necessary in the general classroom? What challenges do teachers face in meeting those needs?
5. What degree of "collaboration" between teaching staff would you consider to be ideal, given the demands of your job at this school? What could be done differently next year in order to achieve a higher degree of collaboration between teachers?
6. What type of training should be offered to teacher aides working in both ALP and general classrooms?
7. What could be done to improve communication between administration and teaching staff in the upcoming year?
8. What changes to the special education programming at this school would you like to see?
9. To what extent do you feel (or desire to feel) a part of this community? Does that have an effect on your approach to teaching at this school?
10. What type of support do you generally need from parents? What could be done to bring this about?

Please try to think of things that you would like to propose as **collective recommendations** for the upcoming year. A list of comments will be collected and given to the school administration.

Looking forward to seeing you there!

Teacher-Student Evaluation

Student:
 Grade:
 Date of Birth:
 Teacher:
 Date of Evaluation:

Known Reason for Placement:

1. Reason for Referral to ALP:

2. What adjustments have you made in the classroom, to deal with the challenges this child is faced with and/or presents to the classroom?

Home Environment:

3. Does the child have a stable home environment, to your knowledge?

4. Please describe the nature of the family's involvement in his/her education.

Educational History:

5. To your knowledge, has the student repeated any grades? _____
 6. Please describe the student's attendance record. _____
 7. To your knowledge, did he/she attend kindergarten and pre-kindergarten? _____

Academic Behavior:

8. Learner Characteristics

Strong Subjects:

- ☐ Phys-Ed
☐ Art
☐ Science
☐ Social Studies
☐ Other: _____

Weak Subjects:

- ☐ Core Subject: _____
☐ Unit or Task Area: _____

Learning Style

- ☐ Visual
☐ Auditory
☐ Kinesthetic

Level of Independence:

- ☐ Requires constant monitoring
- ☐ Maintenance checks
- ☐ Other: _____

9. Rate of Task Completion:

- ☐ Slow
- ☐ Impulsive
- ☐ Average
- ☐ Too Fast

Attention Span:

- ☐ Easily distracted
- ☐ Anxious
- ☐ Good
- ☐ Other: _____

Ability to Attend to Task:

- ☐ Very Poor
- ☐ Limited
- ☐ Good
- ☐ Other: _____

Rate of Impulsivity:

- ☐ High
- ☐ Occasional
- ☐ Context-dependent
- ☐ Other: _____

Rate of Impulsivity:

- ☐ High
- ☐ Occasional
- ☐ Low
- ☐ Context-dependent. Please describe:

Rate of Hyperactivity:

- ☐ High
- ☐ Occasional
- ☐ Low
- ☐ Context-dependent. Please describe:

Dominant cognitive style(s):

- ☐ Concrete thinker
- ☐ Abstract thinker
- ☐ Problem solver
- ☐ Divergent thinker
- ☐ Creative

Long-term Memory:

- ☐ Good
- ☐ Fair
- ☐ Poor

Short-term Memory:

- ☐ Good
- ☐ Fair
- ☐ Poor

Physical/developmental impairments:

- ☐ Speech
- ☐ Hearing
- ☐ Sight

10. Social Skills & Attributes

Classroom Interaction:

- ☐ Class clown
- ☐ Asks questions
- ☐ Asks for help
- ☐ Disruptive
- ☐ Off task
- ☐ Other: _____

Behaviour / Rapport:

- ☐ One-on-one: _____
- ☐ Small group: _____
- ☐ Class: _____

Response to New or Difficult Information:

- ☐ Gives up
- ☐ Tunes out
- ☐ Off task, then asks for help
- ☐ Refuses to try
- ☐ Other: _____

Response to Criticism From an Authority Figure:

- ☐ Well
- ☐ Poor. Please describe: _____

Response to Criticism From Classmates:

- ☐ Well
- ☐ Poor. Please describe: _____

Collective work habits:

- ☐ Volunteers to help others
- ☐ Competitive
- ☐ Productive in collaborative efforts
- ☐ Awkward when help is offered by peers
- ☐ Disruptive towards others who are working
- ☐ Productive in a work setting involving pairs
- ☐ Productive in a small group setting
- ☐ Other: _____

Please describe the general nature of students' peer relations:

Personality type:

- ☐ Demanding
- ☐ Defiant
- ☐ Aggressive
- ☐ Passive
- ☐ Introverted
- ☐ Extroverted
- ☐ Judgmental
- ☐ Sensitive
- ☐ Other: _____

Affect:

- ☐ Happy
- ☐ Sad
- ☐ Angry
- ☐ Listless
- ☐ Stable
- ☐ Unstable
- ☐ Other: _____

Mood:

- ☐ Depressed
- ☐ Anxious
- ☐ Stressed
- ☐ Other: _____

Classroom Communication:

11. How does the student express thoughts and ideas?

12. How would the student explain an event or process to others?

13. How does the student contribute to classroom discussion?

Progress:

14. Have you noticed any change in the student's academic performance in his/her problem area(s) over the academic year?

15. Have you noticed any change in his/her work habits over the same period?

16. Have you noticed any change in his/her behaviour?

17. Have you noticed any change in his/her self-esteem in general?

18. Have you noticed any change in his/her attitude towards learning in general?

19. Have you noticed any change in his/her attitude towards achievement (e.g., pride in his/her work, willingness to take credit for success, willingness to take failure in stride)?

20. Is there any factor that you are aware of that can be considered dominant in shaping the student's life at school at this point in time?

Ethics Commitment

Of dual importance to the research team are the issues of **confidentiality** and **informed consent**.

Confidentiality will be maintained in several ways. All interview transcriptions and personal information collected from participants will be accessible only to members of the research team. Personal names and any details that may allow the reader to identify a given speaker will be altered in as they appear in published texts, including all reports and articles. In cases where the results of the study are being shared informally (i.e., at meetings of the school board or school staff), the researcher will make sure that her comments are generalized in character, and not attributed to any one person.

Informed consent implies that key elements of the study be *effectively communicated* to all participants and community representatives so that the research process remains, at all stages, open and comprehensible to the communities involved. In using this stance as a launching point, the research team confirms that the place of primary commitment and accountability in performing this research is to the individual members of the communities involved, and to the community in general.

At one level, informed consent entails the mutual acceptance of a legal consent form that confirms that every participant is aware of the following:

- the purpose of the research,
- the major questions that the research team plans to investigate,
- the risks, benefits, and consequences associated with the individual's participation, and
- the manner in which the results of the study will be used and publicized.

It is assumed that participants in fact "own" the information that they have agreed to share with the researcher, even after that information has been supplied. A protocol has been developed to aid the researcher in incorporating this idea into the research process, by standardizing how information will be used in an accountable and open manner at every stage of the study. Steps will be taken to ensure that participants and the host community are aware of the purpose and progress of the study throughout the three years in question. This also implies that participants be kept abreast as the study changes in any way (as changes are made to the design or questions, for example, or as research topics shift).

The following is a summary of the protocol I intend to use at each stage of the study to ensure I have informed consent from all parties involved.

DATA COLLECTION:

General Orientation:

Formal meetings will be held with representatives of the host communities, including the school board, school staff, and tribal council. At these meetings, the research design will be made available. The researcher will make herself available in the weeks to come to answer any questions or concerns that cropped up.

Informal class visits will be used to introduce the researcher to the students for the purpose of briefly explaining her upcoming presence in the school and the nature of the project. A memo was sent home to parents with the same information. Following that, home visits will be made with the community liaison worker to introduce the study and researcher to those parents who are to be asked to participate. Finally, the researcher attended the first Parent Council and staff meetings, to make herself available for questions.

Given the extensive communication with the community and its children implied by the research design, and that everyone has a different way of communicating their feelings, it should be stressed that the researcher will be watchful for any signs of discomfort or dissent given by community members when approached about participating, or having their children participate, in the study. Especially during this early period, she will be open to discussing and re-discussing the purpose and process of the research until the community in general is at ease with the process.

Interviews:

At the beginning of each interview, the researcher will read and discuss each clause of the consent form aloud. It will be made clear that their participation in the project is completely up to them: that the study will have no impact on their job (if the person is employed at the school), or on their child's place in the program (if the person in question is a parent of a child in ALP). The researcher will stress that the study is separate from the program itself, but will be used to evaluate and improve the program in future years.

Before being asked to sign, the participant will be asked if there are any clauses that they did not understand, or are not particularly uncomfortable with. If necessary (and appropriate in light of the research goals and design), the consent form will be modified to accommodate any concerns; if their concerns are too pronounced, it will be suggested that they reconsider their decision to participate in the study. Once the researcher is satisfied that the participant understands and is comfortable with the

intention of the form, she or he will be asked to sign. A copy of the form will be returned to the participant, and the master copy retained by the researcher.

Where parents are involved, the researcher will give details on what they can expect related to their children's participation in the study: how the one-on-one interviews and focus group discussions (if relevant) will run; how the observation periods in the ALP room will run; and how each session will be recorded (e.g., notes, tape recorded, or videotaped). Any request or concern voiced at this point will be recorded and respected. The researcher will offer each parent a copy of the questions to be asked during student interviews to take home and read. If parents need extra assurance, they will be invited to sit in on the interview with their child or children. The consent form described above includes several clauses that relate to the involvement of the participant's child's or children's in the study.

For the sake of efficiency, the researcher will ask the permission of all participants to tape-record the interview. For those who are uncomfortable with the process, their responses will be written down. The researcher will inform each participant how the notes, audio- or video-tapes will be used and then disposed.

Observations:

The parental consent form will include a clause to be signed by parents indicating that they have allowed the researcher to videotape a period in the ALP room when their child or children are present. However, parents will also be contacted by phone or home visit to confirm this decision immediately before the observation period is held.

Intra-session reports:

Progress reports will be submitted on a monthly basis to the tribal council, school board, school administration, and university advisory committee. School staff and parents will be made aware that the reports are available for their review. Informal reports will be made by the researcher at staff and parent council meetings.

Transcripts:

A copy of each participant's transcript, *in the form that will be used during analysis*, will be returned to each person for their review and comments. In cases where the person in question is unable to read, the researcher and research assistant will offer to go through the transcript with them.

DISSEMINATION:***Sessional report:***

A formal report summarizing the findings of a given session on-site will be submitted to the tribal council, school board, school administration, and university advisory committee. A short note will be included with each participant's transcript indicating that the report is available. The report will be made available on the Just for Kids webpage with restricted access, and those participants with Internet access will be given a password. For those without Internet access, copies will be returned to key informants and parents who have expressed an interest. Flyers will be posted in public spaces (band office, school, radio announcement) stipulating that the report is available for review by participating community members at the band office, and a list of people who should have access to the report will be left with the Director of Education.

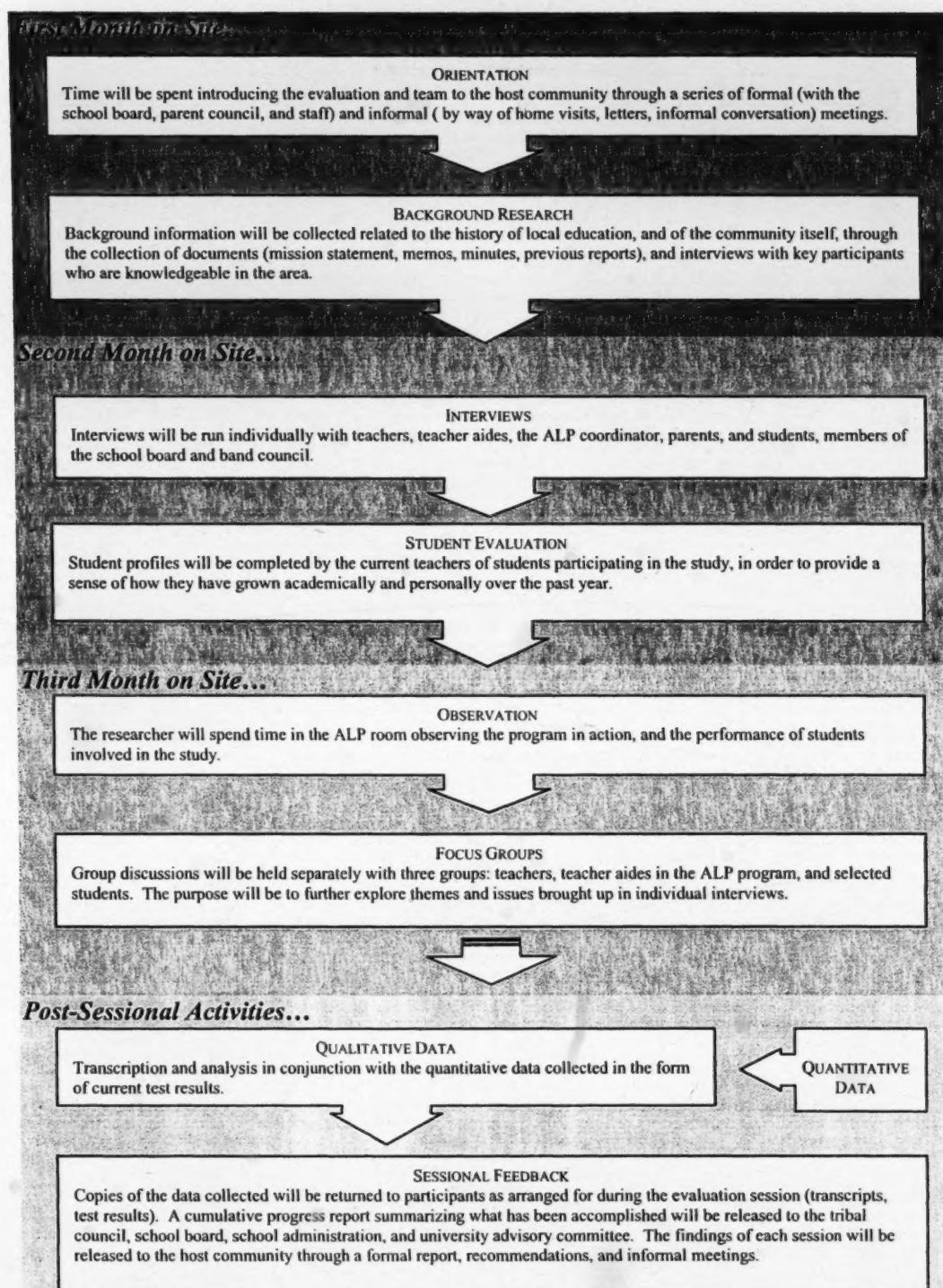
Publications:

At the end of the study (in three years time) as articles or reports are published using the data collected, draft copies will be sent for review and comment to representatives of the host communities. The host communities in question will be given notice and details on where to locate the pieces in their published form. A notice will also be posted on the Just for Kids webpage.

Manual:

When an ALP manual is produced towards the end of the entire study (towards the end of the study), a draft will be sent to each host community for review and comment.

Sessional Timeline



Cumulative Timeline

This study uses two types of data to measure the same phenomenon: the academic and personal growth of a child. This outline illustrates how the quantitative and qualitative components of the research process fit together.

Year	Quantitative Data	Qualitative Data	Illustration
1	A BASELINE WILL BE CREATED USING SCORES FROM THE WOODCOCK-JOHNSON, R, WISC-III, AND PROVINCIAL ACHIEVEMENT TESTS (WHERE APPLICABLE).		IN MAY, THE WOODCOCK-JOHNSON AND WISC-III ARE RUN WITH PATRICIA, A STUDENT NEARING THE END OF GRADE 2. PATRICIA HAS BEEN RECOMMENDED FOR PLACEMENT IN GRADE 3 WITH ALP FOR THE UPCOMING YEAR, FOR THE PURPOSE OF RECEIVING EXTRA SUPPORT IN LANGUAGE ARTS.
	ALP		PATRICIA ATTENDS ALP FOR ONE PERIOD A DAY THROUGHOUT THE SCHOOL YEAR, RECEIVING DIRECT INSTRUCTION IN ALL AREAS OF LANGUAGE ARTS.
	THE FIRST POST-INTERVENTION ASSESSMENT IS MADE, MEASURING HOW FAR EACH CHILD HAS COME OVER THE PAST YEAR.	INTERVIEWS ARE DONE TO EXPLORE STUDENT PROGRESS, AND TO DETERMINE DOMINANT FACTORS IN STUDENT PERFORMANCE AT SCHOOL.	ONCE PATRICIA HAS HAD A SIGNIFICANT DEGREE OF EXPOSURE TO THE PROGRAM, THE RESEARCH TEAM SPENDS TIMES WITH HER, HER FATHER, HER GRADE 3 TEACHER, AND HER ALP INSTRUCTOR ABOUT HER EXPERIENCES AND PROGRESS TOWARDS THE END OF THE SCHOOL YEAR. PATRICIA REPEATS THE TESTING BATTERY WHILE ALSO WRITING THE GRADE 3 PROVINCIAL ACHIEVEMENT TEST.
2	ALP		BASED ON AN AVERAGE PERFORMANCE IN THE TESTING BATTERY, PATRICIA HAS ADVANCED TO GRADE 4, AGAIN ON THE CONDITION THAT SHE RECEIVE SUPPORT IN READING AND WRITING FROM THE ACCELERATED LEARNING PROGRAM.
	A SECOND POST-INTERVENTION ASSESSMENT IS MADE TO MEASURE HOW FAR EACH CHILD HAS COME OVER THE PAST YEAR.	FURTHER INTERVIEWS AND/OR SURVEYS ARE USED TO EXAMINE PARTICULAR VARIABLES DISCOVERED IN THE FIRST SESSION.	THIS TIME, A STUDENT EVALUATION IS COMPLETED BY PATRICIA'S CURRENT TEACHER TO GAUGE HOW SHE IS PROGRESSING. TOWARDS THE END OF THE SCHOOL YEAR, PATRICIA REPEATS THE WOODCOCK-JOHNSON AND WISC, WHICH THIS TIME INDICATE THAT SHE CAN PROBABLY HANDLE GRADE FIVE WITHOUT ATTENDING ALP.
3	ALP		IN GENERAL, PATRICIA REMAINS IN HER GRADE 5 CLASS FOR LANGUAGE ARTS PERIODS THROUGHOUT THE YEAR. HOWEVER, SHE TRAVELS TO THE ALP ROOM ONCE IN A WHILE TO GET INDIVIDUALIZED SUPPORT IN LEARNING A NEW CONCEPT, OR TO PRACTICE A SKILL THAT SHE IS HAVING PARTICULAR DIFFICULTY WITH.
	A THIRD POST-INTERVENTION ASSESSMENT IS MADE TO MEASURE HOW FAR EACH CHILD HAS COME OVER THE PAST YEAR.	FURTHER INTERVIEWS AND/OR SURVEYS ARE USED TO EXAMINE PARTICULAR VARIABLES DISCOVERED IN THE FIRST SESSION.	PATRICIA'S SIXTH GRADE TEACHER COMPLETES A STUDENT EVALUATION TOWARDS THE END OF THE YEAR TO DOCUMENT PATRICIA'S PROGRESS. PATRICIA COMPLETES THE TESTING BATTERY FOR A FINAL TIME, AND PASSES INTO GRADE 6.

Similar data collected from the second community is combined.

Cumulative Analysis

APPENDIX B

INSTRUCTIONAL METHODOLOGIES

Appendix B: Instructional Methodologies

Suburban-Caucasian Learning Preferences	First Nation Learning Profiles
Well-defined, organized.	Informal atmosphere.
Auditory learner. Prefers verbal instructions, explanations.	Visual learner, prefers demonstrations, illustrations.
Listens to explanations, then learns by trial and error. Wants teacher as consultant.	Observes carefully, then tries when secure in doing so. Wants teacher as model.
Prefers direct instruction. Likes to try new things.	Prefers to be shown. Likes learning through stories, pictures, activities.
Starts with parts, specific facts, and builds toward the whole.	Starts with general principles, holistic, overall view.
Insists on reason, logic, facts, causes.	Accepts intuition, coincidence, feelings, emotion, hunches.
Competes for recognition.	Cooperates and assists.
Task oriented.	Socially oriented.
Impersonal, formal, structured.	Personal, informal, spontaneous.
Likes discover approach.	Likes guided approach.
Relies on language for thinking and remembering.	Relies on images for thinking and remembering.
Likes talking and writing	Likes drawing and manipulation.

(Adapted from Gilliland, 1995, p. 82)

A Scaffolding Example: The Story Map

Name _____ Date _____

Story Title _____

The story setting was _____

The main character was _____

Other characters were _____

The problem began when _____

Then several important things happened: _____

After that _____

Next _____

The problem was solved by _____

The story ends when _____

A Sample Reciprocal Teaching Dialogue

- Student 1:* My question is, What does the aquanaut see when he goes under water?
- Student 2:* A watch.
- Student 3:* Flippers.
- Student 4:* A belt.
- Student 1:* Those are all good answers.
- Teacher:* Nice job! I have a question too. Why does the aquanaut wear a belt? What is so special about it?
- Student 3:* It's a heavy belt and keeps him from floating up to the top again.
- Teacher:* Good for you.
- Student 1:* For my summary now: This paragraph was about what aquanauts need to take when they go under the water.
- Student 5:* And also why they need those things.
- Student 3:* I think we need to clarify the word "gear."
- Student 6:* That's the special things they need.
- Teacher:* Another word for *gear* in the story might be *equipment*, the equipment that makes it easier for the aquanauts to do their job.
- Student 1:* I don't think I have a prediction to make.
- Teacher:* Well, in the story, they tell us that there are many strange and wonderful creatures that aquanauts see as they do their work. My prediction is that they'll describe some of these creatures. What are some of the strange creatures you already know about that live in the ocean?
- Student 6:* Octopuses.
- Student 3:* Whales.
- Student 5:* Sharks.
- Teacher:* Listen and find out. Who will be our next teacher?

Common Learning Strategies

RAP	A reading comprehension strategy for checking paragraph comprehension	COPS	An editing strategy for checking a paragraph
R	Read the paragraph	C	Capitalization
A	Ask questions about the content	O	Overall appearance
P	Paraphrase the content	P	Punctuation
		S	Spelling
SCORER	A strategy for taking multiple-choice tests	RIDER	A visual imagery strategy
S	Schedule your time	R	Read the sentence
C	Clue words	I	Imagine a picture of it in your mind
O	Omit difficult questions	D	Describe how the new image differs from the old
R	Read carefully	E	Evaluate to see that the image contains everything
E	Estimate your answer	R	Repeat as you read the next sentence
R	Review your work		

NOTE: Learning strategies are available from a variety of sources (see Bender, 1996; Carman & Adams, 1972; Clark, Deshler, Schumaker, Alley, & Warner, 1984; Day & Elksnin, 1994; Ellis, 1994). Also, the University of Kansas Center for Research on Learning (Lawrence, KS) offers training in strategy instruction.

A Sample Direct Instruction Script

Teacher: Listen. Here's a rule. Just because someone important in one area says something is good or bad in another area, you can't be sure it's true. (Repeat.)

Teacher: When someone important in one area says something is good or bad in another area, can you be sure it's true?

Student: No.

Teacher: No, just because someone important in one area says something is good or bad in another area, you can't be sure it's true.

Teacher: Ok, listen. Former President George Bush says that Dodge trucks are the best pick-up trucks available.

Teacher: What do you know about former President George Bush?

Student: He's an important person. He knows politics.

Teacher: In what area is he important?

Student: Politics around Washington.

Teacher: And what's this important person saying?

Student: That Dodge makes the best truck.

Teacher: So what is the area that he is talking about?

Student: Trucks.

Teacher: Since we're learning to judge what people say, can you be sure what a former president says about trucks is true?

Student: No.

Teacher: What can you say when someone important says something is good or bad?

Student: (Student should respond with something like,) You can't be sure it's true, if it's not his background or area of expertise.

Teacher: Listen, if I tell you that former President George Bush says that politics is a hard life, would you believe him?

Student: Yes. That's an area he knows about.

Correction procedure: If a child answers "No," ask, "What do you know about the important person?" And then review the rule above.)

Teacher: Yes, you can choose to believe that. Why?

(Accept the answer in varying form, provided that the following information is given: [1] he's a former president or politician, [2] former presidents know about politics, and [3] he's talking about something he knows about.)

Sample Phonological Activities and Lesson Plans

Guess the Word Game Lesson

Objective: Students will be able to blend and identify a word that is stretched out into component sounds.

Materials needed: Picture cards of objects that students are likely to recognize, such as sun, bell, fan, flag, snake, tree, book, cup, clock, and plane.

Activity: Place a small number of picture cards before children. Tell them you are going to say a word using "snail talk"—a slow way of saying words (e.g., fffff lllll aaaaa ggggg). They have to look at the pictures and guess what the snail is saying. It is important to have the children guess the answer in their head so that everyone gets an opportunity to try it before hearing other answers. Alternate between having one child identify the word and having all children say the word aloud in chorus to keep the children engaged.

Segmentation Lesson

Objective: Students will be able to segment various parts of oral language.

Materials needed: List of brief phrases or poems children would know (e.g., "I scream. You scream. We all scream for ice cream").

Activities:

- (a) Early instruction involves teaching the children to segment sentences into individual words. Have the children clap their hands with each individual word.
- (b) As children advance, teach them to segment words into syllables. You may wish to start with children's names (Al-ex-an-der; Ra-chel).
- (c) When children have learned to remove the first phoneme from a word, teach them to segment short words into individual phonemes (s-u-n; s-t-o-p).

Change the Letter Game

Objective: Students will be able to detect the letter change and pronounce the word with the substitute letter.

Materials needed: List of word cards, each of which presents a simple noun with three letters and a picture of that object (consonant-vowel-consonant words; e.g., bat, cup, hat, ham, etc.).

Activities: Students: "Mr. Sound will show you a word and then will change the first letter of the word." (Show a picture of a bat.) "Say this word together." (Students say bat.) "Mr. Sound wants to change the first sound to an h." (Teacher says the letter sound for h and not the letter name.) "If Mr. Sound changes that sound, what would be the matching picture?" Encourage each student to decide on the answer prior to calling on a student for the answer.

SOURCE: These ideas were adapted from "Phonological Awareness: Instructional and Assessment Guidelines" by Chard, D. J., & Dickson, S. V. (1999). *Intervention in School and Clinic*, 34, 261-270. ©1999 by PRO-ED, Inc. Adapted with permission.

A Prediction/Summarization Tactic

Before Reading

What is the story title? _____

What content predictions can I make based on that? _____

Are there pictures that suggest the topic? _____

What do I want to learn about that topic? _____

During Reading

What is the main idea or problem? _____

How was the problem managed? _____

After Reading

Was the problem successfully dealt with? _____

What is the main story or lesson? _____

What did I learn? _____

APPENDIX C

FUTURE DIRECTIONS

Appendix C: Future Directions

After completing an intensive first session where the scope of questions was intended to map the complex network of factors that shape the quality of school experience for the students in question, several directions for future investigation emerged.

The data we had accumulated led us to identify six main variables that combine to shape the ability of students to perform in the Accelerated Learning Programme in particular, and in the learning context in general. These variables are as follows:

1. The quality of **programming** in the Accelerated Learning Programme.
 - Does programming reflect the goals adopted by the intervention in general (e.g., programmes designed to meet individual students' skill level, the use of individualized criteria for evaluation etc.)?
 - Does programming reflect school goals for special needs?
2. The quality of **instruction** in the programme.
 - The effectiveness of instruction delivered by instructors in ALP.
 - The effectiveness of programme coordination.
3. The **coordination of programming** between the ALP and homeroom settings
 - Consistency between the intervention and the general education programme (i.e., the coordination of skills and content between the two settings).
 - The effectiveness of instruction delivered by homeroom teachers.
4. Students' **active engagement** as learners
 - What factors inform the likelihood that a student will be actively engaged in the learning process in their target areas (i.e., intrinsic and extrinsic variable – family situation, age, peer relations, and so on)?
5. Student **motivation** in general
 - How are students motivated within the ALP room and homeroom settings to perform (i.e., use of positive reinforcement; the effect of assessment; elements of homeroom programming that motivate students to perform)?
6. The presence of a **community of support** for all stakeholders involved in meeting the needs of students with special needs.
 - Parent support and understanding of education
 - Attendance
 - Impact of the quality of home life on motivation and achievement at school.

Of these six, we have decided to shift our attention to those variables that speak to characteristics common to students who have been identified as having benefited the most from the programme: students who not only have shown vast improvement in achievement levels from one year to the next, but who are also noted to have grown as independent learners. The variables in question also spring from domains over which any given school can claim to have modest control. As such, the variables chosen for further investigation included the following:

1. The **active engagement** of students as learners. We use "active engagement" to describe the necessary predisposition to self-regulated behaviour (which in turn increases the likelihood that students will independently evoke strategies and skills taught in ALP in the context of tasks given to them in the homeroom).
2. **Student motivation.**
 - a. We define "student motivation" as institutional elements of the Accelerated Learning and homeroom programmes that encourage or compel students to become actively engaged in the learning process.

While the qualitative instruments used during the initial research sessions were developed on site, research in the second session will involve the use of standard questionnaires and scales as well as the continued comparison of scores from the standardized tests described in the research design.